UNIVERSITY OF KENTUCKY
Purchasing Division

REQUEST FOR PROPOSALS

UK-2313-23

U.S. EPA Title V Air Emissions Testing Services

ADDENDUM # 1

3/15/2023

ATTENTION: This is not an order. Read all instructions, terms and conditions carefully.

IMPORTANT: RFP AND ADDENDUM MUST BE RECEIVED BY 4/14/2023 @ 3:00 P.M. LEXINGTON, KY TIME

Offeror must acknowledge receipt of this and any addendum as stated in the Request for Proposal.

Please review and incorporate Attachment A, included here, in your proposal.

SIGNATURE

_____

_____

Typed or Printed Name

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

Patricia Pflug

_____

Contracting Officer / (859) 257-5409

University of Kentucky
Purchasing Division
322 Peterson Service Building
Lexington, KY 40506-0005

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DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 SOWER BOULEVARD
FRANKFORT, KENTUCKY 40601
TELEPHONE: 502-564-2150
TELEFAX: 502-564-4245

October 6, 2021

University of Kentucky
ATTN: Ms. Andrea Smith, Air Quality Compliance Manger
225 Frank D. Peterson Service Bldg.
Lexington, KY 40506

RE: Minor Revision to a Title V Permit

Permittee Name:	University of Kentucky
Source ID:	21-067-00003
Agency Interest:	1104
Activity:	APE20210002
Permit:	V-18-052 R1

Dear Ms. Smith:

University of Kentucky applied for a Minor Revision to their Title V permit at their facility located in Fayette County, Kentucky. Affected States (Ohio) were notified of the issuance of the proposed revision on August 12, 2021 via e-mail. (No other states are affected by this permit action.) The United States Environmental Protection Agency (U.S. EPA) was notified of the issuance of the proposed permit revision on August 12, 2021. The U.S. EPA comment period expired 45 days from the date of the notification. No comments were received during this period. The revised permit is now being issued final. If applicable, the Division will perform an air toxics evaluation at the next significant permit modification or renewal, whichever comes first.

Included with this cover letter is the signed final permit for this facility, with the effective dates shown on the title page. The revised permit supersedes all permits previously issued to this source, and carries with it the authority to operate any newly permitted emission units in

accordance with the terms and conditions in this permit. If you have any questions regarding this matter, you may contact Mr. Zachary Bittner at (502) 782-6555.

Sincerely,

X Stephanie Burberry

Stephanie Burberry
Administrative Specialist III
Permit Review Branch
Division for Air Quality

SB/SD
Enclosures

Commonwealth of Kentucky
Division for Air Quality

EXECUTIVE SUMMARY

FINAL
Title V, Operating
Permit: V-18-052 R1
University of Kentucky
Lexington, KY 40506
September 27, 2021
Stacie Daniels, Reviewer

SOURCE ID:	21-067-00003
AGENCY INTEREST:	1104
ACTIVITY:	APE20210002

SOURCE DESCRIPTION:

University of Kentucky (UK) is a public education institution that has a Title V permit, covering its main campus in Lexington, Kentucky. UK is classified as a Title V source due to it having potential emissions greater than a major source threshold for the following regulated air pollutants: nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter (PM). UK has ten (10) dual-fired natural gas and diesel-fired boilers, four (4) coal-fired boilers, and twenty-six (26) natural gas-fired boilers. UK has eighty-three (83) diesel-fired emergency use generators and fourteen (14) natural gas-fired emergency use generators. UK has two (2) maintenance shop paint booths. UK also operates various insignificant activities including a cabinet shop cyclone separator, storage tanks, laboratory hoods, small boilers and heaters, paint spray booths, TSD consolidation, and a small distillery.

DESCRIPTION OF ACTION:

The application received on April 5, 2021 is for the removal of limits to preclude 40 CFR 63, Subpart JJJJJJ from EUs 01, 02, 09, 10, 15, 16, 51, 82, 83, and 84.

The Division also updated the permit with the off-permit change application received on January 22, 2021 is for the removal of five diesel-fired emergency generators from EU 59, one natural gas-fired emergency generator from EU 78, and addition of distillery operations, including a 2.929 MMBtu/hr natural gas-fired boiler.

U.S. EPA REVIEW:

The United States Environmental Protection Agency (U.S. EPA) was notified of the issuance of the proposed permit on August 12, 2021. The comment period expired 45 days from the date of notification. No comments were received during this period. The permit is now being issued final.

Commonwealth of Kentucky
Division for Air Quality

STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-18-052 R1
University of Kentucky
Lexington, KY 40506
August 6, 2021
Stacie Daniels, Reviewer

SOURCE ID:	21-067-00003
AGENCY INTEREST:	1104
ACTIVITY:	APE20210002

Table of Contents

SECTION 1 – SOURCE DESCRIPTION

SIC Code: 8221, Colleges and Universities
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: Fayette
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): Hydrochloric Acid

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

*PTE does not include self-imposed emission limitations.

Description of Facility:
University of Kentucky (UK) is a public education institution that has a Title V permit, covering its main campus in Lexington, Kentucky. UK is classified as a Title V source due to it having potential emissions greater than a major source threshold for the following regulated air pollutants: nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter (PM). UK has ten (10) dual-fired natural gas and diesel-fired boilers, four (4) coal-fired boilers, and twenty-six (26) natural gas-fired boilers. UK has eighty-three (83) diesel-fired emergency use generators and fourteen (14) natural gas-fired emergency use generators. UK has two (2) maintenance shop paint booths. UK also operates various insignificant activities including a cabinet shop cyclone separator, storage tanks, laboratory hoods, small boilers and heaters, paint spray booths, TSD consolidation, and a small distillery.

SECTION 2 – CURRENT APPLICATION

Permit Number: V-18-052 R1 Activities: APE20210002

Received: 4/5/2021 Application Complete Date(s): 6/3/2021

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:

- APE20210001: (off-permit change)
  - EU 59: Removal of five diesel-fired emergency generators from Building #s 149, 150, 152, 143, and 145.
  - EU 78: Removal of one natural gas-fired emergency generator from Blanding IV (Building #146).
  - Addition of EU 87, a 2.929 MMBtu/hr natural gas-fired indirect heat exchanger with 401 KAR 59:015 applicability.
  - Addition of the following distillery operations to Insignificant Activities: grain handling operations, six fermenters, and an aging warehouse.
- APE20210002: Removal of the limits to preclude 40 CFR 63, Subpart JJJJJJ from the following emission units: 01, 02, 09, 10, 15, 16, 51, 82, 83, and 84.
  - APE20150005: On May 25, 2021, UK submitted an addendum to show that the 48 hour limit placed on fuel oil for EUs 01 & 02 was not to preclude PSD.

Actual to Projected Actual Emissions for Replacement of EUs 01 & 02			
Pollutant	Baseline (2012+2013)/2 (tpy)	Projected Actual (tpy)	Actual to Projected Actual Emissions (tpy)
CO	19.50	48.50	29.00
NO_x	64.85	39.90	-24.95
PM	1.76	5.62	3.60
SO_2	0.14	0.95	0.81
VOC	1.08	4.38	3.30

  - EUs 15, 16, & 51 potential emissions were calculated using limits placed to preclude PSD. The removal of the 48 hour diesel usage does not trigger PSD applicability
  - EUs 09 & 10 were constructed prior to 1970 and therefore preclude PSD.
  - EUs 82, 83, & 84 were rolled into UK's permit through the Title V renewal received on June 13, 2017. The emissions increase with the addition of these units was under SER increases without the 48 hour limit on fuel oil. Therefore, PSD was not triggered.

- Previous potential emissions were calculated using 48 hours for fuel oil and 8,712 hours for natural gas. Current potential emissions utilize 8,760 hours of either natural gas or fuel oil, whichever is higher.

V-18-052 R1 Emission Summary				
Pollutant	**2021 Actual[a] (tpy)**	**Previous PTE V-18-052 (tpy)**	**Change (tpy)**	**Revised PTE V-18-052 R1 (tpy)**
CO	45.9	538.6	-12.1	526.5
NO_X	1.4.4	1,280.3	213.7	1,494.0
PT	17.9	266.2	109.7	375.9
PM_{10}	17.9	265.5	110.0	375.5
$PM_{2.5}$	17.1	265.4	110.0	375.4
SO_2	90.8	1,737.8	2.1	1,739.9
VOC	4.4	68.6	0.6	69.2
Lead	0.00	0.05	0.04	0.09
Greenhouse Gases (GHGs)				
Carbon Dioxide	91,246	7,358,117	189,334	7,547,451
Methane	1.68	142	0	142
Nitrous Oxide	1.45	134	0	134
CO_2 Equivalent (CO_2e)	91,720	7,401,659	189,337	7,590,996
Hazardous Air Pollutants (HAPs)				
Hexane; N-Hexane	1.09	7.75	0.06	7.81
Hydrochloric Acid	5.11	9.00[b]	0.00	9.00[b]
Hydrofluoric Acid	0.45	8.53	0.00	8.53
Combined HAPs:	6.87	22.5[b]	0.00	22.5[b]

[a]Actual emission are from Emission Inventory System 2020 report; Record Date: 04/2020.
[b]To preclude 40 CFR 63, Subpart DDDDD, the permittee has taken source-wide limits not to exceed 9.0 tpy for HCl and a 22.5 tpy limit for Total HAPs.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Units 01 and 02 Dual Fuel-Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.10 lbs/MMBtu	401 KAR 59:015, Section 4(1)(c)	**Natural gas** 5 lb/MMscf **Fuel oil** 4.2 lb/1000gallons Basis: Manufacturer Specifications	Assumed based upon manufacturer specifications; AP-42 emission factors; or stack test for natural gas and fuel oil
	20% opacity	401 KAR 59:015, Section 4(2) 40 CFR 60.43b(f)		Assumed while combusting natural gas. Fuel oil is by US EPA Method 9 test
SO_2	0.80 lbs/MMBtu	401 KAR 59:015, Section 5(1)	**Natural gas** 0.6 lb/MMscf Basis: AP-42, Table 1.4-2 **Fuel oil** 0.08 lb/1000 gallons Basis: Manufacturer Specifications	Assumed while combusting natural gas; Fuel oil compliance is by fuel certification.
NOx	0.20 lb/MMBtu	40 CFR 60.44b(a) and (i)	**Natural gas** 35.9 lb/MMscf **Fuel oil** 17.7 lb/1000 gallons Basis: Manufacturer Specifications	NOx CEMS

Initial Construction Date: 2017

Process Description:
Dual-fired boilers used to provide hot water and heat to various buildings.
Fuels: Natural Gas & Ultra Low Sulfur Fuel Oil
Control: Ultra Low NO_x burners

KYEIS Designation EU01: EU 01: Central Heating Boiler #1; Maximum Continuous Rating: 127 MMBtu/hr
KYEIS Designation EU02: EU 02: Central Heating Boiler #2; Maximum Continuous Rating: 127 MMBtu/hr

Emission Units 01 and 02 Dual Fuel-Fired Indirect Heat Exchanger
Applicable Regulations: 401 KAR 59:015 New indirect heat exchangers 401 KAR 60:005, Section 2(2)(c) 40 C.F.R. 60.40b to 60.49b (Subpart Db), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units 401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources **Comments:** Emission factors are from AP-42 1.4, AP-42 1.3 and manufacturer specifications. On May 25, 2021, UK submitted an addendum to show that the 48 hour limit placed on fuel oil (APE20150005 minor revision application that replaced EUs 01 and 02) was not to preclude PSD. The Division concurs. APE20210002 minor revision removes the 48 hour fuel oil limit, causing 40 CFR 63, Subpart JJJJJJ to be applicable. These units are now required to have a biennial tune-up.

Emission Units 15 and 16 Dual Fuel-Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.10 lbs/MMBtu	401 KAR 59:015, Section 4(1)(c)	**Natural gas** 7.14 lb/MMscf Basis: Manufacturer Specifications **Fuel oil** EU 15 = 1.85 lb/1000gallons EU 16 = 1.42 lb/1000gallons Basis: 2013 Stack Test	Assumed based upon manufacturer specifications; AP-42 emission factors; or stack test for natural gas and fuel oil
	20% opacity	401 KAR 59:015, Section 4(2) 40 CFR 60.43b(f)		Assumed while combusting natural gas. Fuel oil is by US EPA Method 9 test
SO_2	0.80 lbs/MMBtu	401 KAR 59:015, Section 5(1)	**Natural gas** 0.6 lb/MMscf Basis: AP-42, Table 1.4-2 **Fuel oil** 0.21 lb/1000gallons Basis: AP-42, Table 1.3-1	Assumed while combusting natural gas; Fuel oil compliance is by fuel certification.

Emission Units 15 and 16 Dual Fuel-Fired Indirect Heat Exchanger				
NOx	0.20 lb/MMBtu	40 CFR 60.44b(a) and (i)	**Natural gas** 10.25 lb/MMscf Basis: Manufacturer Specifications **Fuel oil** EU 15 = 9.23 lb/1000 gallons EU 16 = 10.23 lb/1000 gallons Basis: 2013 Stack Test	NOx CEMS

Initial Construction Dates: EU 15: 2007 & EU 16: 2009

Process Description:
Dual-fired boilers used to provide hot water and heat to various buildings.
Fuels: Natural Gas & Ultra Low Sulfur Fuel Oil
Control: Ultra Low NO_x burners

KYEIS Designation 15: EU 15: Central Utility Plant Boiler #2; Maximum Continuous Rating: 150 MMBtu/hr
KYEIS Designation 16: EU 16: Central Utility Plant Boiler #3; Maximum Continuous Rating: 150 MMBtu/hr

Applicable Regulations:
401 KAR 59:015 New indirect heat exchangers

401 KAR 60:005, Section 2(2)(c) 40 C.F.R. 60.40b to 60.49b (Subpart Db), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Precluded Regulation:
401 KAR 51:017, Prevention of significant deterioration of air quality, precluded for EUs 15 & 16.

Comments:
Emission factors are from AP-42 1.4, AP-42 1.3, manufacturer specifications and a 2013 stack test.

To preclude 40 CFR 60.42b and 40 CFR 60.43b, the natural gas and fuel oil shall contain no more than 0.30 weight percent sulfur.

To preclude 401 KAR 51:017 applicability:
1. Sulfur weight percent in the fuel shall not exceed 0.3 percent for fuel oil and 2.0 grains/SCF for natural gas.
2. Combined NO_x emissions from EUs 15, 16, and 60-67 shall not exceed 36 tons during any 12 consecutive months.
3. Combined SO_2 emissions from EUs 15, 16, and 60-67 shall not exceed 36 tons during any 12 consecutive months.

Emission Units 15 and 16 Dual Fuel-Fired Indirect Heat Exchanger
4. Combined CO emissions from EUs 15, 16, and 60-67 shall not exceed 90 tons during any 12 consecutive months. See **Section 4, Table A - Group Requirements**. APE20210002 minor revision removes the 48 hour fuel oil limit, causing 40 CFR 63, Subpart JJJJJJ to be applicable. These units are now required to have a biennial tune-up and a one-time energy assessment.

Emission Units 09, 10 and 82 Dual Fuel-Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	EU 09 & 10: 0.29 lb/MMBtu EU 82: 0.53 lb/MMBtu	401 KAR 61:015, Section 4(1)(a)	**Natural gas:** 7.6 lb/MMscf Basis: AP-42, Table 1.4-2 **Fuel oil:** 3.3 lb/1000 gallons Basis: AP-42, Table 1.3-1	Assumed based upon AP-42 emission factors for natural gas and fuel oil
	20% opacity	401 KAR 61:015, Section 4(1)(b)		Assumed based upon natural gas combustion; Fuel oil is by US EPA Method 9 test
SO_2	EU 09 & 10: 4.0 lb/MMBtu EU 82: 4.97 lb/MMBtu	401 KAR 61:015, Section 5(1)	**Natural gas:** 0.6 lb/MMscf Basis: AP-42, Table 1.4-2 **Fuel oil:** 0.21 lb/1000 gallons Basis: AP-42, Table 1.3-1	Assumed based upon AP-42 emission factors for natural gas and fuel oil

Initial Construction Date: Before 1970

Process Description:
Dual fuel-fired boilers used to provide hot water and heat to various buildings.
Fuels: Natural Gas and Ultra Low Sulfur Fuel Oil

KYEIS Designation 09: EU 09: Medical Center Boiler #03; Maximum Continuous Rating: 144 MMBtu/hr
KYEIS Designation 10: EU 10: Medical Center Boiler #04; Maximum Continuous Rating: 144 MMBtu/hr
KYEIS Designation 82: EU 82: Samaritan 03; Maximum Continuous Rating: 20.9 MMBtu/hr

Applicable Regulation:
401 KAR 61:015, Existing indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Comments:
Emission factors are from AP-42 Chapters 1.3 and 1.4.

These units were constructed before 1970 and are therefore exempt from PSD applicability.

APE20210002 minor revision removes the 48 hour fuel oil limit, causing 40 CFR 63, Subpart JJJJJJ to be applicable. These units are now required to have a biennial tune-up and a one-time energy assessment.

Emission Units 20-21 and 57 Natural Gas Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	EU 20-21: 0.26 lb/MMBtu EU 57: 0.10 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	7.6 lb/MMscf Basis: AP-42, Table 1.4-2	Assumed based upon AP-42 emission factors for natural gas
	20% opacity	401 KAR 59:015, Section 4(2)		
SO_2	0.80 lb/MMBtu	401 KAR 59:015, Section 5(1)	0.6 lb/MMscf Basis: AP-42, Table 1.4-2	Assumed based upon natural gas combustion

Initial Construction Dates: EU 20 and 21 before 1987 and EU 57 between 1986-2002

Process Description:
Natural gas-fired boilers used to provide hot water and heat to various buildings.

KYEIS Designation 20-21: EU 20-21: Bruce Poundstone Boilers;
Maximum Continuous Rating: 2.5 MMBtu/hr each

KYEIS Designation 57: EU 57: Eleven Boilers used for
Engineering Transportation (1), Nutter Field House (4), SAE fraternity (1),
Boone Tennis Center (2), Building 200 (2) and Bosworth Hall (1);
Maximum Continuous Rating (MMBtu/hr): Ranging between 1.0 & 9.0

Applicable Regulation:
401 KAR 59:015, New indirect heat exchangers

Non-applicable Regulation:
401 KAR 63:002, 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers: Area Sources. This regulation does not apply to natural gas-fired boilers [40 CFR 63.11195(e)].

Comments:
Emission factors are from AP-42, Chapter 1.4.

Emission Units 22-48 Twelve Natural Gas Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.29 lb/MMBtu	401 KAR 61:015, Section 4(1)(a)	7.6 lb/MMscf Basis: AP-42, Table 1.4-2	Assumed based upon AP-42 emission factors for natural gas
	40% opacity	401 KAR 61:015, Section 4(1)(b)		
SO_2	4.0 lb/MMBtu	401 KAR 61:015, Section 5(1)	0.6 lb/MMscf Basis: AP-42, Table 1.4-2	Assumed based upon natural gas combustion

Initial Construction Date: before 1956

Process Description:
Natural gas boilers used for to provide hot water and heat to various buildings.
KYEIS Designation: 22-48: EU 22-33:
Shawneetown Boilers (12 in number); Maximum Continuous Rating: 1.25 MMBtu/hr each; total 15.0 mmBtu/hr

Applicable Regulation:
401 KAR 61:015, Existing indirect heat exchangers

Non-applicable Regulation:
401 KAR 63:002, 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers: Area Sources. This regulation does not apply to natural gas-fired boilers [40 CFR 63.11195(e)].

Comments:
Emission factors are from AP-42, Chapter 1.4.

Emission Unit 51, 83 and 84 Dual Fuel-Fired Indirect Heat Exchanger				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	EU 51: 0.10 lb/MMBtu EU 83 & 84: 0.39 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	**Natural gas:** 7.6 lb/MMscf Basis: AP-42, Table 1.4-2 **Fuel oil:** 3.3 lb/1000 gallons Basis: AP-42, Table 1.3-1	Assumed based upon manufacturer specifications, or AP-42 emission factors for natural gas and fuel oil
	20% opacity	401 KAR 59:015, Section 4(2) & 40 CFR 60.43c(c) and (d)		Assumed based upon natural gas combustion. Fuel oil is by US EPA Method 9 test
SO_2	EU 51: 0.8 lb/MMBtu EU 83 & 84 4.97 lb/MMBtu	401 KAR 59:015, Section 5(1)	**Natural gas:** 0.6 lb/ton Basis: AP-42, Table 1.4-2 **Fuel oil:** 0.21 lb/1000 gallons Basis: AP-42, Table 1.3-1	Assumed based upon natural gas combustion. Fuel oil compliance is by fuel certification.

Initial Construction Dates: EU 51: 2004, EU 83 & 84: 2006

Process Description:
Dual fuel-fired boilers used to provide hot water and heat to various buildings.
Fuels: Natural Gas & Ultra Low Sulfur Fuel Oil
Control: Low NO_x Burner on EU 51

KYEIS Designation: 51-52: EUST-51: EU 51: Central Utility Plant Boiler #1;
Maximum Continuous Rating: 72.3 MMBtu/hr
KYEIS Designation 83: EU 83: Samaritan Hospital Boiler #S1;
Maximum Continuous Rating: 12.0 MMBtu/hr
KYEIS Designation 84: EU 84: Samaritan Hospital Boiler #S2;
Maximum Continuous Rating: 12.0 MMBtu/hr

Applicable Regulations:
401 KAR 59:015 New indirect heat exchangers

401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c to 60.48c (Subpart Dc), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Emission Unit 51, 83 and 84 Dual Fuel-Fired Indirect Heat Exchanger

Precluded Regulation:
401 KAR 51:017, Prevention of significant deterioration of air quality. For EU 51, the permittee has elected to accept voluntary federally enforceable operating and emission limitations to preclude applicability of these standards.

Comments:
Emission factors are from AP-42, Chapters 1.3 and 1.4.

For EU 51 to preclude 401 KAR 51:017 applicability:

1. Combined NO_x emissions from EUs 51 and 53 shall not exceed 30 tons during any 12 consecutive months.
2. Combined SO_2 emissions from EUs 51 and 53 shall not exceed 26 tons during any 12 consecutive months.
3. Combined CO emissions from EUs 51 and 53 shall not exceed 32 tons during any 12 consecutive months.

APE20210002 minor revision removes the 48 hour fuel oil limit, causing 40 CFR 63, Subpart JJJJJJ to be applicable. These units are now required to have a biennial tune-up and a one-time energy assessment.

Emission Units 87 Natural Gas Fired Indirect Heat Exchanger

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.10 lb/MMBtu	401 KAR 59:015, Section 4(1)(b)	7.6 lb/MMscf Basis: AP-42, Table 1.4-2	Assumed while combusting natural gas.
	20% opacity	401 KAR 59:015, Section 4(2)		
SO_2	0.8 lb/MMBtu	401 KAR 59:015, Section 5(1)(b)1.	0.6 lb/MMscf Basis: AP-42, Table 1.4-2	

Initial Construction Date: May 28, 2021

Process Description:
Natural gas-fired boiler used to provide process heat to the distillery operations at the James B. Beam Institute for Kentucky Spirits
Maximum Continuous Rating: 2.929 MMBtu/hr

Applicable Regulation:
401 KAR 59:015, New indirect heat exchangers

Comments:
Emission factors are from AP-42, Chapter 1.4.

Emission Units 07 and 08 Two Coal-Fired Indirect Heat Exchangers				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	1.09 lb/MMBtu	401 KAR 61:015, Section 4(1)(a)	Controlled: EU 07 = 6.46 lb/ton EU 08 = 4.07 lb/ton Basis: 2020 Stack test	Stack test
	40% opacity	401 KAR 61:015, Section 4(1)(c)		Weekly EPA method 9
SO_2	6.0 lb/MMBtu	401 KAR 61:015, Section 5(1)	30.4 lb/ton Basis: AP-42, Table 1.1-3	AP 42 emission factor
Hg	2.2E-05 lb/MMBtu	40 CFR 63.11201(a),	EU 07 = 2.3 x 10-5 lb/ton EU 08 = 2.8 x 10-5 lb/ton Basis: 2020 Stack test	Stack test
CO	420 ppm by volume on a dry basis @ 3% oxygen	40 CFR 63.11210(b)	EU 07 = 1.83 lb/ton EU 08 = 1.02 lb/ton Basis: 2020 Stack test	Stack test

Initial Construction Date: before 1958

Process Description:
Coal boilers used to provide hot water and heat to various buildings.
Control: Cyclone integral to operation
KYEIS Designation 07: EU 07: Medical Center Boiler #1;
Maximum Continuous Rating: 75.0 MMBtu/hr
KYEIS Designation 08: EU 08: Medical Center Boiler #2;
Maximum Continuous Rating: 75.0 MMBtu/hr

Applicable Regulation:
401 KAR 61:015, Existing indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Non-applicable Regulation:
40 CFR Part 64, Compliance assurance monitoring (CAM).

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

Comments:
Emission factors are from AP-42, Chapter 1.1 and stack testing. These boilers are coal fired and each have a cyclone to control PM to meet the 401 KAR 61:015 emission standards for particulate matter. Stack test emission factors are used to calculate the actual emissions, not potential emissions.

Emission Unit 13 Two Coal-Fired Indirect Heat Exchangers				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	0.20 lb/MMBtu	401 KAR 59:015, Section 4(1)(c)	EU 13-1 = 3.69 lb/ton Basis: 2013 Stack test EU 13-2 = 5.10 lb/ton Basis: 2012 Stack test	Stack test
	20% opacity	401 KAR 59:015, Section 4(2)		Weekly EPA method 9
SO_2	1.20 lb/MMBtu	401 KAR 59:015, Section 5(1)	30.4 lb/ton Basis: AP-42, Table 1.1-3	AP 42 emission factor
Hg	2.2E-05 lb/MMBtu	40 CFR 63.11201(a),	EU 13-1 = 0.0004 lb/ton EU 13-2 = 3.04E-05 Basis: 2013 Stack test	Stack test
CO	420 ppm by volume on a dry basis @ 3% oxygen	40 CFR 63.11210(b)	EU 13-1 = 0.60 lb/ton Basis: 2013 Stack test EU 13-2 = 6.0 lb/ton Basis: AP-42, Table 1.1-3	Stack test

Initial Construction Date: Before 1977

Process Description:
Coal boilers used to provide hot water and heat to various buildings.
Control: Cyclone integral to operation
KYEIS Designation 13: EU 13 Consists of two coal fired boilers
EU 13-1: Central Boiler #4; Maximum Continuous Rating: 93.7 MMBtu/hr
EU 13-2: Central Boiler #5; Maximum Continuous Rating: 93.7 MMBtu/hr

Applicable Regulations:
401 KAR 61:015, Existing indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Non-applicable Regulation:
40 CFR Part 64, Compliance assurance monitoring (CAM).

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

Comments:
Emission factors are from AP-42 Chapter 1.1 and stack testing. These boilers are coal fired and each has a cyclone to meet the 59:015 emission standards for particulate matter. Stack test emission factors are used to calculate the actual emissions, not potential emissions.

Emission Units 49 and 50 Paint Booths				
Pollutant	**Emission Limit or Standard**	**Regulatory Basis for Emission Limit or Standard**	**Emission Factor Used and Basis**	**Compliance Method**
PM	E=2.34 lb/hr, P≤0.50	401 KAR 59:010, Section 3(2)	5.6 lb/ton Basis: Engineering Estimate	Maintain the unit with manufacturer's recommendation
	20% opacity	401 KAR 59:010, Section 3(1)(a)		
E(emission rate in lb/hr) and P(process rate in tons/hr)				

Initial Construction Date: 07/1975

Process Description:
Maintenance Shop Paint Spray booths; maximum operating rate: 2.0 gallons/hr, each
Located indoors and controlled by fabric filters with 99% collection efficiency

Applicable Regulation:
401 KAR 59:010, New process operations

Comments:
EU 49-50 emission factors are from MSDS sheets and renewal application.

Emission Units 53, 54, 55, 56, 59, 63, 64, 65 and 66:
Sixty-Three Diesel-Fired Emergency Generators

Initial Construction Dates: between 1963 and 2005

Process Description: Backup diesel engines
KYEIS Designation 53: EU 53: Central Utility Plant Generator;
Total engine rating: 2,885 hp (2,000 kW)
KYEIS Designation 54: EU 54: Total of 7 generators at the following locations:
Medical Central Heating and Cooling rated at 2,385 hp
Ben Roach Facility rated at 750hp
Combs Bldg rated at 679 hp
Wright Medical Plaza rated at 1,332 hp
KY Clinic rated at 749 hp
UK Hospital-Chandler rated at 1,592 hp
and Sander Brown Bldg rated at 587 hp
KYEIS Designation 55: EU 55: Total of 9 generators at the following locations:
Central Heating Plant rated at 752 hp
Chemistry-Physics rated at 800 hp
Medical Center Heating and Cooling rated at 749 hp
ASTECC rated at 1,232 hp

Emission Units 53, 54, 55, 56, 59, 63, 64, 65 and 66:
Sixty-Three Diesel-Fired Emergency Generators

Plant Sciences rated at 1,502 hp
W. T. Young Library rated at 1,482 hp
Patterson Office Tower rated at 555 hp
Robotics Bldg. rated at 455 hp
And Anderson Bldg. rated at 562 hp

KYEIS Designation 56: EU 56: Total of 7 generators at the following locations:
Whitney Cancer Facility rated at 335 hp
Sanders-Brown rated at 434 hp
College of Nursing rated at 227 hp
Dental Science rated at 449 hp
Willard Medical rated at 330hp
Lee Todd Bldg. rated at 429 hp
Research Bldg. #1 rated at 39 hp

KYEIS Designation 59: EU 59: Total of 35 generators at the following building number locations (with ratings):
12 (157 hp), 14 (24 hp), 17 (126 hp), 19 (94 hp), 22 (71 hp), 23 (157 hp), 38 (13 hp), 39 (52 hp), 42 (315 hp), 54 (315 hp), 55 (472 hp), 58 (39 hp & 315 hp), 64 (55 hp), 91 (472 hp), 99 (472 hp), 101 (220 hp), 107 (275 hp), 197 (39 hp), 215 (230 hp), 219 (71 hp), 220 (55 hp), 222 (378 hp), 236 (448 hp), 241 (157 hp), 274 (20 hp), 275 (157 hp), 276 (157 hp), 277 (79 hp), 283 (96 hp), 353 (80 hp), 494 (94 hp), 495 (98 hp), 504 (63 hp) & 505 (157 hp)

KYEIS Designation 63-63: Total of 4 generators at the following locations:
EU 63: Roselle Hall (63) rated at 390 hp
EU 64: Baldwin Hall (64) rated at 390 hp
EU 65: Joe Craft Center (65) rated at 277 hp and
EU 66: Parking Structure #7 (66) rated at 166 hp

Applicable Regulation:
N/A

Non-applicable Regulation:
401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Precluded Regulations:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

401 KAR 51:017, Prevention of significant deterioration of air quality for EUs 51, 53, 63, 64, 65, 66

Comments:
Emission factors are from AP-42, Chapters 3.3 and 3.4

Emission Units 60–62, 67, 68, 69, 70, 71, 75, 76, 77, 79, 81-1, 81-2 and 86
Nineteen Emergency Diesel-Fired Engines

Initial Construction Date: between 2007 and 2019

Process Description: Backup diesel engines
KYEIS designation 60-69: 5 diesel generators at the following locations:
EU 60-62: Medical Center Heating and Cooling Plant (60-62 – 3 units) rated at 3,286 hp each
EU 67: Central Utility Plant (67) rated at 3,286 hp and
EU 69: New Patient Care Parking Structure #8 (69) rated at 755 hp
KYEIS designation 68; EU 68: Central utility Plant; 3,634 hp
KYEIS designation 70: Consists of 2 generators at the following locations:
EU 70-1: Gatton Business & Economics (70-1) rated at 762 hp and
EU 70-2: Commonwealth Stadium (70-2) rated at 755 hp
KYEIS designation 71: consists of 2 generators at the following locations:
EU 71-1: Football Training Center (71-1) rated at 320 hp and
EU 71-2: Baseball Stadium (71-2) rated at 463 hp
KYEIS designation 75: EU 75: Davis Marksbury Bldg. rated at 229 hp
KYEIS designation 76: EU 76: Parking Structure # 2 rated at 611 hp
KYEIS designation 77: EU 77: Wildcat Coal Lodge rated at 157 hp
KYEIS designation 79: EU 79: Softball Complex rated at 64 hp
KYEIS designation 81-01: EU 81-1: Jacobs Science Bldg. rated at 1200 hp
KYEIS designation 81-02: EU 81-2: Student Center rated at 3,640 hp
KYEIS designation 85: EU 85:
EU 85-1: Samaritan Hospital (85-1) rated at 1,125 hp
EU 85-2: Samaritan Hospital (85-2) rated at 1,125 hp
KYEIS designation 86:
EU 86: Rosenberg Law Building rated at 464 hp

Applicable Regulations:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Precluded Regulation:
401 KAR 51:017, Prevention of significant deterioration of air quality for EUs 60-62, 67, 68

Comments:
Emission factors are from AP-42, Chapters 3.3 and 3.4, or manufacturer specifications.
EU 60-62 and EU 67 combined shall not operate more than 500 hour per year to preclude applicability of 401 KAR 51:017.

Emission Unit 78 - Nine Natural Gas-Fired Emergency Generators

Initial Construction Date: between 1961 to 2004

Process Description: Backup natural gas engines.
KYEIS Designation: 78; EU 78: It consists of 9 natural gas emergency generators at the following locations:

EU 78-1: M I King (78-1) rated at 60 hp
EU 78-3: Terrell (not operative)(78-3) rated at 23 hp
EU 78-4: Memorial Hall (78-4) rated at 12 hp
EU 78-5: Multi-Disciplinary Research #3 (78-5) rated at 68 hp
EU 78-6: Garrigus Bldg. (78-6) rated at 150 hp
EU 78-7: T. H. Morgan Biological (78-7) rated at 68 hp
EU 78-8: Oswald (78-8) rated at 83 hp
EU 78-9: IRIS (78-9) rated at 23 hp and
EU 78-11: Building 200 (78-11)rated at 38 HP

Applicable Regulation:
N/A

Non-applicable Regulation:
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Precluded Regulation:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Comments:
Emission factors are from AP-42, Chapter 3.2.

Per Comments received on 7/21/2021, EU 78-12 was misidentified as a natural gas-fired engine instead of a diesel-fired engine and was moved to EU 56.

Emission Units 72 and 80 - Four Natural Gas-Fired Emergency Engine

Initial Construction Date: between 2014 and 2015

Process Description:
Backup natural gas engines
KYEIS Designation: 72; EU 72: The 90 rated at 701 hp
KYEIS Designation :80; Consists of 3 engines at the following locations:

Building 400 (EU 80-1) rated at 82 hp
Agronomy Headhouse (EU 80-2) rated at 85 hp and
Arts and Visual Bldg (EU 80-3) rated at 259 hp

Applicable Regulations:

Emission Units 72 and 80 - Four Natural Gas-Fired Emergency Engine
401 KAR 60:005, Section 2(2)(eeee), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines 401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines **Comments:** Emission factors are from AP-42, Chapter 3.2.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements\Results

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
EU07	Cyclone	PM	401 KAR 61:015, Section 4(1)	Every 4 years	Method 5	1.09 lb/MMBtu	0.28 lb/MMBtu	Stack Gas Flowrate: 20,165 dscfm	CMN20040001	3/9/2004
EU08							0.44 lb/MMBtu	Stack Gas Flowrate: 23,939 dscfm		3/10/2004
EU03			401 KAR 59:015, Section 4(1)(c)			0.20 lb/MMBtu	0.32 lb/MMBtu	Stack Gas Flowrate: 11,000 dscfm		3/11/2004
EU04							0.20 lb/MMBtu	Stack Gas Flowrate: 13,200 dscfm		3/17/2004

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
EU13-1	Cyclone	PM	401 KAR 59:015, Section 4(1)(c)	Every 4 years	Method 5	0.20 lb/MMBtu	0.10 lb/MMBtu	Stack Gas Flowrate: 23,160 dscfm	CMN20040002	10/20/2004
EU08	Cyclone	HCl	N/A	N/A	Method 26A	N/A	0.000495 lb/MMBtu	52,333 lb/hr steam	CMN20060001	6/27/2006
		Cl_2					0.000354 lb/MMBtu			
EU13-2		HCl					0.008 lb/MMBtu	60,533 lb/hr steam		7/72006
		Cl_2					0.005 lb/MMBtu			
Boiler #5		HCl	N/A	N/A	Method 26A	N/A	0.012 lb/MMBtu	63,533 lb/hr steam	CMN20060002	7/6/2006
		Cl_2					0.008 lb/MMBtu			
EU13-2	Cyclone	PM	401 KAR 59:015, Section 4(1)(c)	Every 4 years	Method 5	0.20 lb/MMBtu	0.196 lb/MMBtu	54800 lb/hr steam flow	CMN20120001	10/9-11/2012
		HCl	N/A	N/A	Method 26A	N/A	0.033 lb/MMBtu			

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
		Cl_2					0.003 lb/MMBtu			
EU07	Cyclone	PM	401 KAR 61:015, Section 4(1)	Every 4 years	Method 5	1.09 lb/MMBtu	0.155 lb/MMBtu	47733 lb/hr steam flow		
		HCl	N/A	N/A	Method 26A	N/A	0.028 lb/MMBtu			
		Cl_2					0.003 lb/MMBtu			
EU08	Cyclone	PM	401 KAR 61:015, Section 4(1)	Every 4 years	Method 5	1.09 lb/MMBtu	0.195 lb/MMBtu	45533 lb/hr steam flow		
		HCl	N/A	N/A	Method 26A	N/A	0.026 lb/MMBtu			
		Cl_2					0.003 lb/MMBtu			
Boiler #4 (EU13)	Cyclone	PM	401 KAR 59:015, Section 4(1)(c)	Every 4 years	5	0.2 lb/MMBtu	0.142 lb/MMBtu	N/A	CMN20130001	3/27-29/2013

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
		HCl	Source-Wide Limit	N/A	26A	N/A	0.026 lb/MMBtu			
		Cl_2	N/A		26A		0.00028 lb/MMBtu			
		NOx			7E		0.307 lb/MMBtu			
Boiler #2 (EU15)	Low NOx Burners	PM	401 KAR 59:015, Section 4(1)(c)	N/A	5	0.1 lb/MMBtu	0.013 lb/MMBtu			
		NOx	40 CFR 60.44b(h)		7E	0.2 lb/MMBtu	0.065 lb/MMBtu			
Boiler #3 (EU16)		PM	401 KAR 59:015, Section 4(1)(c)		5	0.1 lb/MMBtu	0.01 lb/MMBtu			
		NOx	40 CFR 60.44b(h)		7E	0.2 lb/MMBtu	0.072 lb/MMBtu			
Cummins Model GTA28 Engine	N/A	NOx	40 CFR 60.4233(d) and (e) referencing	N/A	7E	160 ppmvd @15% O_2	8.76 ppmvd @15% O_2	458.6 KW	CMN2015 0001	10/16/2015

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
		VOC	Table 1 to Subpart JJJJ of Part 60].		25A	86 ppmvd @15% O_2	35.72 ppmvd @15% O_2			
		CO			10	387 ppmvd @15% O_2	164.1 ppmvd @15% O_2			
EU 08	Cyclone	PM	401 KAR 61:015, Section 4(1)	N/A	5	1.09 lb/MMBtu	0.076 lb/MMBtu	43,500 lb/hr	CMN2017 0001	8/29-31/2017
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	0.032 lb/MMBtu			
		Cl_2	N/A				0.0002 lb/MMBtu			
		CO	40 CFR 63.11210(b) and 40 CFR 63.11201(a)		10	420 ppm @ 3% O_2	130 ppm @ 3% O_2			
		Hg	40 CFR 63.11210(b)		30B	2.2E-05 lb/MMBtu	2.62E-06 lb/MMBtu			

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
EU 07		PM	401 KAR 61:015, Section 4(1)		5	1.09 lb/MMBtu	0.188 lb/MMBtu	44,333.3 lb/hr		
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	0.069 lb/MMBtu			
		Cl_2	N/A				0.00082 lb/MMBtu			
		CO	40 CFR 63.11210(b) and 40 CFR 63.11201(a)		10	420 ppm @ 3% O_2	89.91 ppm @ 3% O_2			
		Hg	40 CFR 63.11210(b)		30B	2.2E-05 lb/MMBtu	3.45E-06 lb/MMBtu			
EU 08	Cyclone	PM	401 KAR 61:015, Section 4(1)	N/A	5	1.09 lb/MMBtu	0.1566 lb/MMBtu	51,266.7 lb/hr	CMN20200001	8/11/2020
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	0.0565 lb/MMBtu			
		Cl_2	N/A				0.0004 lb/MMBtu			
		CO	40 CFR 63.11210(b)		10	420 ppm @ 3% O_2	47.14 ppm @3% O_2			

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
			and 40 CFR 63.11201(a)							
		Hg	40 CFR 63.11210(b)		30B	2.2E-05	1.07E-06 lb/MMBtu			
EU 07		PM	401 KAR 61:015, Section 4(1)		5	1.09 lb/MMBtu	0.2485 lb/MMBtu	52,440.7 lb/hr		8/13/2020
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	0.0545 lb/MMBtu			
		Cl_2	N/A				0.0003 lb/MMBtu			
		CO	40 CFR 63.11210(b) and 40 CFR 63.11201(a)		10	420 ppm @ 3% O_2	75.24 ppm @3% O_2			
		Hg	40 CFR 63.11210(b)		30B	2.2E-05	8.94E-07 lb/MMBtu			
EU 08	Cyclone	PM	401 KAR 61:015, Section 4(1)	N/A	5	1.09 lb/MMBtu	TBD	TBD	CMN20210002	TBD
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	TBD			

Emission Unit	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Thruput and Operating Parameter(s) Established During Test	Activity Graybar	Date of Compliance Testing
		Cl_2	N/A				TBD			
		CO	40 CFR 63.11210(b) and 40 CFR 63.11201(a)		10	420 ppm @ 3% O_2	TBD			
		Hg	40 CFR 63.11210(b)		30B	2.2E-05	TBD			
EU 07		PM	401 KAR 61:015, Section 4(1)		5	1.09 lb/MMBtu	TBD	TBD		TBD
		HCl	40 CFR 63, Subpart DDDDD		26A	9.0 tons source-wide	TBD			
		Cl_2	N/A				TBD			
		CO	40 CFR 63.11210(b) and 40 CFR 63.11201(a)		10	420 ppm @ 3% O_2	TBD			
		Hg	40 CFR 63.11210(b)		30B	2.2E-05	TBD			

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
0.3% sulfur weight for fuel oil	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 15 & 16
2.0 grains/SCF for natural gas	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 15 & 16
200 hours per year and no more than 27,000 gallons of diesel per year	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 53
Each unit limited to 500 hours per year and fuel sulfur weight % shall not exceed 0.3%	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 63, 64, 65 and 66
Emission units combined limited to 500 hours per year and fuel sulfur weight % shall not exceed 0.3%	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 60-62 and 67
30 tpy of NOx emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 51 and 53
26 tpy of SO_2 emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 51 and 53
32 tpy of CO emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 51 and 53
36 tpy of NOx emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 15, 16, 60, 61, 62, 63, 64, 65, 66 & 67
36 tpy of SO_2 emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 15, 16, 60, 61, 62, 63, 64, 65, 66 & 67
90 tpy of CO emissions	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 15, 16, 60, 61, 62, 63, 64, 65, 66 &

Emission and Operating Limit	Regulation	Emission Unit
		67
1,800 hours per 12 months rolling total	To preclude the applicability of 401 KAR 51:017, *Prevention of significant deterioration of air quality*	EU 60, 61, 62, 63, 64, 65, 66 & 67
9.0 tpy HCl emissions	To preclude the applicability of 40 CFR 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*	Source-wide
Change of coal supplier, fuel type or fuel mixture	To preclude the applicability of 40 CFR 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*	EU 07, 08, 13
22.5 tpy Total Hazardous Air Pollutants HAP emissions	To preclude the applicability of 40 CFR 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*	Source-wide

Table B - Summary of Applicable Regulations:

Regulation	Basis of Determination	Emission Unit
401 KAR 59:015	*New indirect heat exchangers*, Applies to emissions units with a rated capacity greater than 1 MMBtu/hr and less than 250 MMBtu/hr which commenced on or after April 9, 1972.	01, 02, 15 ,16, 20, 21, 57, 51, 83, 84, 13, & 87
401 KAR 59:010	*New process operations.* Applicable to all process operations, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.	49, 50
401 KAR 61:015	*Existing indirect heat exchangers*, Applies to emissions units with a rated capacity greater than 1 MMBtu/hr and less than 250 MMBtu/hr which commenced before April 9, 1972.	09, 10, 82, 22-48, 07 & 08
401 KAR 60:005, Section 2(2)(c) 40 C.F.R. 60.40b to 60.49b (Subpart Db)	*Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* applicable to steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 megawatts (MW)	01, 02, 15 &16

Regulation	Basis of Determination	Emission Unit
	(100 million British thermal units per hour (MMBtu/hr)).	
401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c to 60.48c (Subpart Dc)	*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units,* applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.	51, 83 & 84
401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ)	*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.* This regulation does not apply to natural gas-fired boilers [40 CFR 63.11195(e)]. These units shall meet the definition of "gas-fired boiler" in 40 CFR 63.11237 at all times.	01, 02, 15, 16, 09, 10, 82, 51, 83 & 84
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ)	*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* applicable to stationary RICE located at a major or area source of HAP emissions. Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 63, Subpart ZZZZ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 63.6640(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.	60-62, 67-69, 70, 71, 75-77, 79, 81, 85, 72 & 80
401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII),	*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* applicable to a stationary CI ICE that commence construction after July 11, 2005 and are manufactured after April 1, 2006 Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CR 60 Subpart IIII that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 60.4211(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016	60-62, 67-69, 70, 71, 75-77, 79, 81 & 85
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ)	*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. These engines are exempt because they are emergency engines manufactured prior to January 1, 2009 [40 CFR 60.4230(a)]. Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1	72 & 80

Regulation	Basis of Determination	Emission Unit
	(D.C. Cir. 2015)] has vacated the provisions in 40 CR 60 Subpart JJJJ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 60.4243(d)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016	

Table C - Summary of Precluded Regulations:

Regulation	Basis of Determination	Emission Unit
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ)	*National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines,* applicable to stationary RICE located at a major or area source of HAP emissions. Existing institutional emergency stationary RICE located at an area source of HAP emissions are not subject to this subpart.	53-56, 59, 63-66 & 78
401 KAR 63:002, Section 2(4)(iiii) 40 C.F.R. 63.7480 to 63.7575, Tables 1 to 13 (Subpart DDDDD)	*National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* 9.0 tpy limit on HCl and 22.5 tpy limit on total HAPs	07, 08, 13
401 KAR 51:017	*Prevention of Significant Deterioration of Air Quality* See Table A in Section 4 for individual and source-wide limits.	15, 16, 51, 53, 60, 61, 62, 63, 64, 65, 66 & 67

Table D - Summary of Non Applicable Regulations:

Regulation	Basis of Determination	Emission Unit
40 CFR 64	*Compliance assurance monitoring (CAM).* This regulation is applicable to pollutant specific emission units that are subject to an emission limitation, use control devices to achieve compliance, and have pre-control emissions that exceed a major source threshold. It has been determined that the emission units at the source are exempt from CAM since the cyclone are necessary to operate the units.	07, 08, 13
401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart	*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources.* This regulation does not apply to natural gas-fired boilers [40 CFR 63.11195(e)].	20, 21, 57 & 22-48

Regulation	Basis of Determination	Emission Unit
JJJJJJ)		
401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII)	*Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, applicable to units that commence construction after July 11, 2005 and are manufactured after April 1, 2006. These engines are exempt because they are emergency engines manufactured prior to April 1, 2006	53-56, 59, & 63-66
401 KAR 60:005, Section 2(2)(eeee) 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ)	*Standards of Performance for Stationary Spark Ignition Internal Combustion Engines*. These engines are exempt because they are emergency engines manufactured prior to January 1, 2009 [40 CFR 60.4230(a)].	78

Air Toxic Analysis
N/A

Single Source Determination
N/A

SECTION 5 – PERMITTING HISTORY

Permit	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action	PSD/Syn Minor
V-03-023 R1	Significant Revision	56520	07/07/04	09/20/04	Construction of new Boilers and Diesel Generators	
V-03-023 R2	Significant Revision	APE20060002	10/16/06	2/20/07	Construction of new Gas Fired Boilers and Diesel Generators	
V-08-014	Renewal	APE20080001	5/25/08	11/10/08	Operate/Construction Permit	
V-08-014 R1	Minor Revision	APE 20100001	2/15/10	6/7/10	Add Emergency Generator	
V-08-014 R2	Minor Revision	APE 20110003	8/18/11	10/25/11	Add Emergency Generators	
V-13-024	Renewal	APE20130002	7/04/2013	9/03/14	Operate/Construction Permit	
V-13-024 R1	Minor Revision	APE20150001	5/8/15	8/28/15	Add/Remove Emission Units; Correct Administrative Errors	
V-13-024 R2	Minor Revision	APE20150005 APE20160002	4/6/2016	10/21/16	Replace EU 01 and 02; Add temporary boiler, Add EU 81- Two Emergency Generators	
V-18-052	Renewal	APE20170002	7/12/2018	4/2/2020	Operating Permit	

SECTION 6 – PERMIT APPLICATION HISTORY

Permit Number: V-18-052 Activities: APE20170002

Received: 06/13/17 Application Complete Date(s): 07/12/18

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

Description of Action:

A number of changes occurred during this permitting action. Some of the changes were requested by UK and others were made by the Division. During the renewal application, UK requested updates to unit descriptions in Kentucky Emission Inventory System. Other changes to the permit are listed below:

- EU 06 a temporary boiler was removed from the permit.
- Good Samaritan Hospital (AI 1049) and UK (AI 1104) permits were merged into one since UK bought Good Samaritan. Good Samaritan and UK are located on adjacent properties, they are booth under the control of UK and both can be classified under the 8221 SIC code. Emission units 82 thru 85 were added to permit. EU 82, 83, and 84 are natural gas boilers and EU 85 is a diesel generator.
- For EU 82, 83, and 84: updated the monitoring of the natural gas boiler from daily to monthly as allowed by 40 CFR 60.48c(g)(2). The permittee may elect to record and maintain records of the amount of each fuel combusted during each calendar month.
- EU 68 central utility plant emergency generator and insignificant activity central heating plant storage tank were added to the permit based on a 502(b)(10) notification [APE20160003]. EU 71 baseball stadium emergency diesel generator was added based on the 502b(10) notification [APE20170001].
- UK requested an operational permit limit of 300 hours per paint booth for EU 49 and 50. The Division has updated the permit to include the operational limit.
- The insignificant activities list was updated, and EU 58 moved to insignificant activities.
- For EU 15 and 16, 40 CFR 60, Subpart Db was added to applicable regulations.
- For EU 51, 83 and 84, 40 CFR 60, Subpart Dc was added to applicable regulations.
- For EU 49 and 50, paint booths, emissions are now based on a single worst case emission based on combination of products.

- The indirect heat exchangers that have either 401 KAR 61:015 or 401 KAR 59:015 applicable have been updated with new startup and shutdown language.

- The diesel and natural gas engines have been grouped together based on applicable regulations.

- EU 01, 02, 15 and 16 have been grouped together.

- EU 20, 21 and 57 have been grouped together.

Pollutant	Actual* (tpy)	Potential (tpy)
Particulate Matter (PM) PM/PM_{10}/$PM_{2.5}$	.38/5.38/4.20	266/265/265
Sulfur Dioxide (SO_2)	130	1737
Nitrogen dioxide (NO_x)	112	1280
Carbon Monoxide (CO)	54.0	538
Volatile Organic Compounds (VOC)	3.21	68.6
	0.00	0.05
Hazardous Air Pollutants (HAPs)		
Benzene	0.00	0.16
Cyanide, Total (as Cn)	--	0.14
Formaldehyde	0.00	0.43
Hexane: N-Hexane	--	7.75
Hydrochloric Acid (HCl)	3.03	9.0#
Hydrofluoric Acid	--	8.53
TOTAL Hazardous Air Pollutants	3.35	22.5#
Greenhouse Gases		
Carbon Dioxide (CO_2)	88,398	7,358,117
Methane	1.53	142
Nitrous Oxide (N_2O)	1.30	134
CO_2 Equivalent	88,824	7,401,658

*Actual emission are from Emission Inventory System 2017 report
#To preclude 40 CFR 63, Subpart DDDDD, the permittee has taken source-wide limit not to exceed 9.0 tpy for HCl and a 22.5 tpy limit for Total HAPs.

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
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

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601
(502) 564-3999

Final

AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**University of Kentucky**
Mailing Address:	**225 Frank D. Peterson Service Bldg., Lexington, KY 40506**
Source Name:	**University of Kentucky**
Mailing Address:	**225 Frank D. Peterson Service Bldg., Lexington, KY 40506**
Source Location:	**Between S. Upper St. and S. Limestone**
Permit:	**V-18-052 R1**
Agency Interest:	**1104**
Activity:	**APE20210002**
Review Type:	**Title V, Operating**
Source ID:	**21-067-00003**
Regional Office:	**Frankfort Regional Office 300 Sower Boulevard, 1st Floor Frankfort, KY 40601 (502) 564-3358**
County:	**Fayette**
Application Complete Date:	**July 12, 2018**
Issuance Date:	**April 2, 2020**
Revision Date:	**October 3, 2021**
Expiration Date:	**April 2, 2025**

Rick Shewekah

For Melissa Duff, Director
Division for Air Quality

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Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action
V-18-052	Renewal	APE20170002	07/12/18	04/02/20	Operating Permit
V-18-052 R1	Minor Revision	APE20210001 & APE20210002	6/3/2021	10/3/2021	Remove limits to preclude 40 CFR 63, Subpart JJJJJJ from EUs 01, 02, 09, 10, 15, 16, 51, 82, 83, and 84; Addition of EU 87 for distilling operations; Removal of five emergency generators from EU 59; Removal of one natural gas emergency generator from EU 78

SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Energy and Environment Cabinet (Cabinet) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 01 and 02: Dual Fuel-Fired Indirect Heat Exchangers

Description:

EU 01 and 02 (Central Heating Plant Boiler #1 and Boiler#2)

Maximum Continuous Rating (MMBtu/hr):	127 each (EU 01 & 02)
Construction commenced:	2017
Fuels:	Natural Gas & Ultra Low Sulfur Fuel Oil
Control:	Low NOx Burners

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005, Section 2(2)(c) 40 C.F.R. 60.40b to 60.49b (Subpart Db), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

1. **Operating Limitations:**

   a. The permittee shall meet the work practice standards established in 40 CFR Part 63, Table 2 to Subpart JJJJJJ, as established in 401 KAR 63:002, Section 2(4)(jjjjj). [401 KAR 59:015, Section 7(2)(c)]

   b. The permittee shall minimize the boilers' startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, the permittee shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [401 KAR 59:015, Section 7(2)(c) and 40 CFR 63.11201(b) referencing Table 2, Item 1.]

   Compliance Demonstration Method:
   See **6. Specific Reporting Requirements k.3.**

   c. To preclude applicability of 40 CFR 60.42b, 40 CFR 60.43b, and 40 CFR 60.48b, the units shall use only natural gas and very low sulfur oil that contains no more than 0.30 weight percent sulfur [40 CFR 60.42b(k)(2); 40 CFR 60.43b(h)(5); and 40 CFR 60.48b(j)(7)].

   Compliance Demonstration Method:
   Compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements d.** and **f.** and **6. Specific Reporting Requirements i.**

   d. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in 40 CFR 63.11223(b)(1) through (7). Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a biennial tune-up shall conduct a tune-up of the boiler every 5 years as specified in 40 CFR 63.11223(c). [401 KAR 59:015, Section 7(2)(c); 40 CFR 63.11201(b) referencing Table 2, Item 5.; and 40 CFR 63.11223(b) and (c)]

1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up [40 CFR 63.11223(b)]. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up [40 CFR 63.11223(c)]

2. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

3. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

4. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(3)].

5. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

6. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

7. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 days of startup [40 CFR 63.11223(b)(7)]

Compliance Demonstration Method:
Initial compliance shall be demonstrated by performing a tune-up within 180 days of the effective date of the fuel switch. Notification of the change shall be submitted according to 40 CFR 63.11225(g). [40 CFR 63.11210(i); and 40 CFR 63.11214(b)] Continuous compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements g. through i.** and **6. Specific Reporting Requirements k.**

e. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emissions if levels required by 40 CFR 63, Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11205(a)]

f. See **Section D - Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

a. Particulate matter (PM) emissions from each stack shall not exceed

1. 0.10 lbs/MMBtu [401 KAR 59:015, Section 4(1)(c)].

Compliance Demonstration Method:
Units are assumed in compliance with the 401 KAR 59:015 PM emission standard while combusting natural gas or fuel oil based on AP-42 emission factors, manufacturer specifications or most recently approved stack test.

2. While the boilers combust only ultra-low-sulfur liquid fuel, the permittee is not subject to the PM emission limitation in 40 CFR 63, Subpart JJJJJJ, Table 1. If the permittee intends to burn a fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in 40 CFR 63.11237, the permittee shall conduct a performance test within 60 days of burning the new fuel [40 CFR 63.11210(f)].

Compliance Demonstration Method:
Compliance may be demonstrated according to **5. Specific Recordkeeping Requirements h.2.ii.**

b. Opacity emissions from each stack shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:

1. A maximum of 27 percent opacity shall be allowed for one six minute period in any 60 consecutive minutes [401 KAR 59:015, Section 4(2)(a)];

2. For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

Compliance Demonstration Method:
I. These units are assumed to be in compliance with the 401 KAR 59:015 opacity standard while combusting natural gas.
II. While combusting fuel oil, the units shall comply with **2. Emission Limitations c**.

c. While combusting fuel oil, visible emissions from each stack shall not exceed 20 percent opacity (6-minute average) except for one 6-minute period per hour of not more than 27

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

percent opacity [40 CFR 60.43b(f)]. This opacity standard applies at all times, except during periods of startup, shutdown, or malfunction [40 CFR 60.43b(g)].

Compliance Demonstration Method:
Compliance shall be demonstrated according to **3. Testing Requirements b., 4. Specific Monitoring Requirements d.,** and **5. Specific Recordkeeping Requirements c.** and **e**.

d. Sulfur dioxide (SO_2) emissions from each stack shall not exceed 0.8 lb/MMBtu [401 KAR 59:015, Section 5(1)].

Compliance Demonstration Method:
I. Units are assumed to be in compliance with the 401 KAR 59:015 SO2 emission standard while combusting natural gas based on AP-42 emission factors, manufacture specifications or most recently approved stack test.
II. While combusting fuel oil, compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d**. and **6. Specific Reporting Requirements i.**

e. Emissions of nitrogen oxides (expressed as NO_2) from each stack shall not exceed 0.20 lb/MMBtu based on a 30-day rolling average [40 CFR 60.44b(a) and (i)]. This NO_X standard applies at all times including periods of startup, shutdown, or malfunction [40 CFR 60.44b(h)].

Compliance Demonstration Method:
Compliance shall be demonstrated by performance testing under 40 CFR 60.46b(e), recordkeeping, and reporting [40 CFR 60.46b(c)].See **3. Testing Requirements a.**, **4. Specific Monitoring Requirements b. and c.** (if applicable)**, 5. Specific Recordkeeping Requirements b. and e.** and **6. Specific Reporting Requirements c. through h.**

f. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

a. Following the date on which the initial performance test is completed, the permittee shall upon request determine compliance with the NO_X standards in 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) shall be used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate shall be calculated for each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days [40 CFR 60.46b(e)(4)].

b. To determine compliance with the opacity limits under 40 CFR 60.43b (fuel oil), the permittee shall conduct an initial performance test as required under 40 CFR 60.8, and shall conduct subsequent performance tests as requested by the Administrator, using U.S. EPA Reference Method 9 of Appendix A of 40 CFR Part 60 [40 CFR 60.46b(d)(7)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4].

4. Specific Monitoring Requirements:

a. The permittee shall monitor the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) during each day. [40 CFR 60.49b(d)(1)]

b. The permittee shall [40 CFR 60.48b(g)]:

1. Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of 40 CFR 60.48b (NO_X CEMS) [40 CFR 60.48b(g)(1)]; or

2. Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to 40 CFR 60.49b(c) [40 CFR 60.48b(g)(2)]. See **6. Specific Reporting Requirements d.**

c. If the option to operate NO_X CEMS is selected, the permittee shall install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system [40 CFR 60.48b(b)(1)].

1. The CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments [40 CFR 60.48b(c)].

2. The 1-hour average NO_X emission rates measured by the continuous NO_X monitor shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2) [40 CFR 60.48b(d)].

3. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems [40 CFR 60.48b(e)].

4. The NO_X CEMS span value is 500 ppm [40 CFR 60.48(e)(2)(i)].

5. When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 or 7A of appendix A to 40 CFR Part 60 or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days [40 CFR 60.48b(f)].

d. While combusting fuel oil, the permittee shall conduct a performance test using U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 and the procedures in 40 CFR 60.11 to demonstrate compliance with the applicable limit in 40 CFR 60.43b, and shall comply with either 40 CFR 60.48b(a)(1), (2), or (3). The observation period for U.S. EPA Reference Method 9 of Appendix A-4 or 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation [40 CFR 60.48b(a)].

1. Except as provided in 40 CFR 60.48b(a)(2) and (a)(3), the permittee shall conduct subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests using the procedures in 40 CFR 60.48b(a) according to the applicable schedule in 40 CFR 60.48b(a)(1)(i) through (a)(1)(iv), as determined by the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test results [40 CFR 60.48b(a)(1)].

    i. If no visible emissions are observed, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.48b(a)(1)(i)]

    ii. If visible emissions are observed, but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.48b(a)(1)(ii)]

    iii. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or [40 CFR 60.48b(a)(1)(iii)]

    iv. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 test must be completed within 45 calendar days from the date that the most recent performance test was conducted [40 CFR 60.48b(a)(1)(iv)].

2. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests, elect to perform subsequent monitoring using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part 60 according to the procedures specified in 40 CFR 60.48b(a)(2)(i) and (ii) [40 CFR 60.48b(a)(2)].

    i. The permittee shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the permittee shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observations (i.e. 90 seconds) or conduct a new U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test using the procedures in 40 CFR 60.48b(a) within 45 calendar days according to the requirements in 40 CFR 60.46d(d)(7). [40 CFR 60.48b(a)(2)(i)]

ii. If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed. [40 CFR 60.48b(a)(2)(ii)]

3. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in 40 CFR 60.48b(a)(2). For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. [40 CFR 60.47c(a)(3)]

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) each day. [40 CFR 60.49b(d)(1)]

b. The permittee shall maintain records of the following information for each steam generating unit operating day [40 CFR 60.49b(g)]:

1. Calendar date;

2. The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

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3. The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

4. Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40 CFR Part 60.

c. For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in 40 CFR 60.49 (f)(1)(i) through (iii) [40 CFR 60.49b(f)(1)]:

   1. Dates and time intervals of all opacity observation periods [40 CFR 60.49b(f)(1)(i)];

   2. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test [40 CFR 60.49b(f)(1)(ii)]; and

   3. Copies of all visible emission observer opacity field data sheets [40 CFR 60.49b(f)(1)(iii)].

d. The permittee shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in 40 CFR 60.41b and the applicable sulfur limit.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

For the purposes of 40 CFR 60, Subpart Db the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil [40 CFR 60.49b(r)(1)].

e. The permittee shall maintain records of all performance tests [40 CFR 60.49b, 401 KAR 52:020, Section 10].

f. All records required under 40 CFR 60.49b shall be maintained for a period of 2 years following the date of such record [40 CFR 60.49b(o)], and five years per **Section F - Monitoring, Recordkeeping, and Reporting Requirements 2**.

g. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information [40 CFR 63.11223(b)(6)]:

1. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of each boiler [40 CFR 63.11223(b)(6)(i)].

2. A description of any corrective actions taken as a part of the tune-up of each boiler [40 CFR 63.11223(b)(6)(ii)].

3. The type and amount of fuel used over the 12 months prior to the tune-up of each boiler. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

h. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

1. A copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted [40 CFR 63.11225(c)(1)].

2. Records to document conformance with the work practices, emission reduction measure, and management practices required by 40 CFR 63.11214 and 40 CFR 63.11223 as specified below [40 CFR 63.11225(c)(2)]:

i. Records shall identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

ii. Records of the monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that combusts ultra-low-sulfur diesel, the permittee shall keep records, on a monthly basis, of the type of fuel combusted [40 CFR 63.11225(c)(2)(iii)].

3. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment [40 CFR 63.11225(c)(4)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation [40 CFR 63.11225(c)(5)].

5. Records of all inspection and monitoring data required by 40 CFR 63.11221 and 63.11222, and the following information for each required inspection and monitoring [40 CFR 63.11225(c)(6)]:

   i. The date, place, and time of the monitoring event [40 CFR 63.11225(c)(6)(i)].

   ii. Person conducting the monitoring [40 CFR 63.11225(c)(6)(ii)].

   iii. Technique or method used [40 CFR 63.11225(c)(6)(iii)].

   iv. Operating conditions during the activity [40 CFR 63.11225(c)(6)(iv)].

   v. Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation [40 CFR 63.11225(c)(6)(v)].

   vi. Maintenance or corrective action taken (if applicable) [40 CFR 63.11225(c)(6)(vi)].

i. Records shall be in a form suitable and readily available for expeditious review. The permittee shall keep each record for 5 years following the date of each recorded action. The permittee shall keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The permittee may keep the records off site for the remaining 3 years. [40 CFR 63.11225(d)]

6. <u>Specific Reporting Requirements:</u>

a. The permittee shall calculate the annual capacity factor individually for natural gas and fuel oil for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]

b. The permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include [40 CFR 60.49b(a)]:

   1. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; and

   2. The annual capacity factor at which the permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee of each affected facility subject to the SO_2, PM, or NO_X emission limits under 40 CFR 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B of 40 CFR Part 60 [40 CFR 60.49b(b)].

d. The permittee of each affected facility subject to the NO_X standard in 40 CFR 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in 40 CFR 60.48b(g)(2) and the records to be maintained in 40 CFR 60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the permittee shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall [40 CFR 60.49b(c)]:

   1. Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_X emission rates (*i.e.*, ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.*, the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.*, flue gas O_2 level) [40 CFR 60.49b(c)];

   2. Include the data and information that the permittee used to identify the relationship between NO_X emission rates and these operating conditions; and

   3. Identify how these operating conditions, including steam generating unit load, will be monitored under 40 CFR 60.48b(g) on an hourly basis by the permittee during the period of operation of the emission units; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee under 40 CFR 60.49b(g).

e. The permittee shall submit excess emission reports for any excess emissions that occurred during the reporting period [40 CFR 60.49b(h)]. For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under 40 CFR 60.46b(e), that exceeds the applicable emission limits in 40 CFR 60.44b [40 CFR 60.49b(h)(4)].

f. The permittee shall submit reports of the following information for each steam generating unit operating day [40 CFR 60.49b(i)]:

   1. Calendar date;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

3. The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

4. Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40 CFR Part 60.

g. The permittee may submit electronic quarterly reports for NO_X in lieu of submitting the written reports required under paragraphs 40 CFR 60.49b(h), (i), (j), (k) or (l). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Db was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format [40 CFR 60.49b(v)].

h. The reporting period for the reports required under 40 CFR 60, Subpart Db is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period [40 CFR 60.49b(w)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting the definition in 40 CFR 60, Subpart Db, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period [40 CFR 60.49b(r)(1)].

j. The permittee shall submit to the Administrator all of the notifications in 40 CFR 63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply within 120 days after the boilers become subject to the standard. [40 CFR 63.11225(a)(1) and (2)]

k. The permittee shall prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the company name and address and a statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The notification shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.11225(b)(1) and (2)]

    1. "This facility complies with the requirements in 40 CFR 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." [40 CFR 63.11225(b)(2)(i)]

    2. For units that do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.11225(b)(2)(ii)]

    3. "This facility complies with the requirement in 40 CFR 63.11201(b) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available." [40 CFR 63.11223(g) and 40 CFR 63.11225(b)(2)(iii)]

l. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 15 and 16: Dual Fuel-Fired Indirect Heat Exchangers

Description:

EU 15 and 16 (Central Utility Plant Boiler #2 and Boiler #3)

Maximum Continuous Rating (MMBtu/hr):	150 each (EU 15 & 16)
Construction commenced:	EU 15: 2007; EU 16: 2009
Fuels:	Natural Gas & Ultra Low Sulfur Fuel Oil
Control:	Low NOx Burners

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005, Section 2(2)(c) 40 C.F.R. 60.40b to 60.49b (Subpart Db), Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

PRECLUDED REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality.

1. **Operating Limitations:**
   a. To preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), sulfur weight percent shall not exceed 0.3 percent for fuel oil and 2.0 grains/SCF for natural gas.

      Compliance Demonstration Method:
      Compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d**.

   b. To preclude applicability of 40 CFR 60.42b, 40 CFR 60.43b, and 40 CFR 60.48b, the units shall use only natural gas and very low sulfur oil that contains no more than 0.30 weight percent sulfur [40 CFR 60.42b(k)(2); 40 CFR 60.43b(h)(5); and 40 CFR 60.48b(j)(7)].

      Compliance Demonstration Method:
      Compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d.** and **f.** and **6. Specific Reporting Requirements i.**

   c. The permittee shall meet the work practice standards established in 40 CFR Part 63, Table 2 to Subpart JJJJJJ, as established in 401 KAR 63:002, Section 2(4)(jjjjj). [401 KAR 59:015, Section 7(2)(c)]

   d. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in 40 CFR 63.11223(b)(1) through (7). Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up shall conduct a tune-up of the boiler every 5 years as specified in 40

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

CFR 63.11223(c). [401 KAR 59:015, Section 7(2)(c); 40 CFR 63.11201(b) referencing Table 2, Item 4.; and 40 CFR 63.11223(b) and (c)]

1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up [40 CFR 63.11223(b)]. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up [40 CFR 63.11223(c)]

2. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

3. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

4. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(3)].

5. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

6. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

7. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 days of startup [40 CFR 63.11223(b)(7)].

Compliance Demonstration Method:
Initial compliance shall be demonstrated by performing a tune-up within 180 days of the effective date of the fuel switch. Notification of the change shall be submitted according to 40 CFR 63.11225(g). The permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that an initial tune-up was conducted on each boiler. [40 CFR 63.11210(i); and 40 CFR 63.11214(b)] Continuous compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements g. through i.** and **6. Specific Reporting Requirements l.**

e. The permittee shall have a one-time energy assessment performed by a qualified energy assessor within 180 days of the issuance of V-18-052 R1. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

requirements in Table 2 of 40 CFR 63, Subpart JJJJJJ satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008 and March 21, 2014 also satisfies the energy assessment requirements. The energy assessment shall include the following with extent of the evaluation for (1) to (4) of Item 16. in Table 2 of 40 CFR 63, Subpart JJJJJJ appropriate for the on-site technical hours listed in 40 CFR 63.11237 under *Energy Assessment*: [401 KAR 59:015, Section 7(2)(c); 40 CFR 63.11201(b), referencing Table 2, Item 16.]

1. A visual inspection of the boiler system;

2. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;

3. An inventory of major energy use systems consuming energy from affected boilers and which are under control of the boiler owner or operator;

4. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;

5. A list of major energy conservation measures that are within the facility's control;

6. A list of the energy savings potential of the energy conservation measures identified; and

7. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits and the time frame for recouping those investments.

Compliance Demonstration Method:
Compliance shall be demonstrated by **6. Specific Reporting Requirements j.**

f. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11205(a)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance shall be demonstrated by **5. Specific Recordkeeping Requirements h.4.**

g. See **Section D - Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

a. Particulate matter emissions from each stack shall not exceed 0.10 lbs/MMBtu [401 KAR 59:015, Section 4(1)(c)].

Compliance Demonstration Method:
Units are assumed in compliance with the 401 KAR 59:015 PM emission standard while combusting natural gas or fuel oil based on AP-42 emission factors, manufacturer specifications or most recently approved stack test.

b. Opacity emissions from each stack shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:

1. A maximum of 27 percent opacity shall be allowed for one six minute period in any 60 consecutive minutes [401 KAR 59:015, Section 4(2)(a)];

2. For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

Compliance Demonstration Method:
I. These units are assumed to be in compliance with the 401 KAR 59:015 opacity standard when combusting natural gas.
II. While combusting fuel oil, the units shall comply with **2. Emission Limitations c**.

c. While combusting fuel oil, visible emissions from each stack shall not exceed 20 percent opacity (6-minute average) except for one 6-minute period per hour of not more than 27 percent opacity [40 CFR 60.43b(f)]. This opacity standard applies at all times, except during periods of startup, shutdown, or malfunction [40 CFR 60.43b(g)].

Compliance Demonstration Method:
Compliance shall be demonstrated by **3. Testing Requirements d., 4. Specific Monitoring Requirements d.,** and **5. Specific Recordkeeping Requirements c.** and **e**.

d. Sulfur dioxide emissions from each stack shall not exceed 0.8 lb/MMBtu [401 KAR 59:015, Section 5(1)].

Compliance Demonstration Method:
I. Units are assumed to be in compliance with the 401 KAR 59:015 SO_2 emission standard while combusting natural gas based on AP-42 emission factors, manufacture specifications or most recently approved stack test.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

II. While combusting fuel oil, compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d.** and **6. Specific Reporting Requirements i.**

e. Emissions of nitrogen oxides (expressed as NO_2) from each stack shall not exceed 0.20 lb/MMBtu based on a 30-day rolling average [40 CFR 60.44b(a) and (i)]. This NO_X standard applies at all times including periods of startup, shutdown, or malfunction [40 CFR 60.44b(h)].

Compliance Demonstration Method:
Compliance shall be demonstrated by performance testing under 40 CFR 60.46b(e), recordkeeping, and reporting [40 CFR 60.46b(c)].See **3. Testing Requirements a., b. and c.**, **4. Specific Monitoring Requirements a., b. and c.** (if applicable)**, 5. Specific Recordkeeping Requirements b. and e.,** and **6. Specific Reporting Requirements c. through h.**

f. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

a. To determine compliance with the emission limits for NO_X required under 40 CFR 60.44b, the permittee shall conduct a performance test using the continuous system for monitoring NO_X under 40 CFR 60.48b(b)(NO_X CEMS) within 60 days after achieving the maximum production rate at which the emission units will be operated, but not later than 180 days after initial startup, or at such other times specified in 40 CFR Part 60, and at such other times as may be required by the Administrator [40 CFR 60.46b(e) and 40 CFR 60.8].

b. For the initial compliance test, NO_X emissions from the steam generating units shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standards under 40 CFR 60.44b. The 30-day average emission rate shall be calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period [40 CFR 60.46b(e)(1)].

c. Following the date on which the initial performance test is completed, the permittee shall upon request determine compliance with the NO_X standards in 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to 40 CFR 60.48b(g)(1) or 40 CFR 60.48b(g)(2) shall be used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate shall be calculated for each steam generating unit operating day as the average of all of the hourly NO_X emission data for the preceding 30 steam generating unit operating days [40 CFR 60.46b(e)(4)].

d. To determine compliance with the opacity limits under 40 CFR 60.43b (fuel oil), the permittee shall conduct an initial performance test as required under 40 CFR 60.8, and shall

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

conduct subsequent performance tests as requested by the Administrator, using U.S. EPA Reference Method 9 of Appendix A of 40 CFR Part 60 [40 CFR 60.46b(d)(7)].

e. Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 50:045, Section 1 and 401 KAR 59:005, Section 2(2)].

4. Specific Monitoring Requirements:

a. The permittee shall monitor the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) during each day. [40 CFR 60.49b(d)(1)]

b. The permittee shall [40 CFR 60.48b(g)]:

1. Comply with the provisions of paragraphs (b), (c), (d), (e)(2), (e)(3), and (f) of 40 CFR 60.48b (NO_X CEMS) [40 CFR 60.48b(g)(1)]; or

2. Monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to 40 CFR 60.49b(c) [40 CFR 60.48b(g)(2)]. See **6. Specific Reporting Requirements d.**

c. If the option to operate NO_X CEMS is selected, the permittee shall install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system [40 CFR 60.48b(b)(1)].

1. The CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments [40 CFR 60.48b(c)].

2. The 1-hour average NO_X emission rates measured by the continuous NO_X monitor shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2) [40 CFR 60.48b(d)].

3. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems [40 CFR 60.48b(e)].

4. The NO_X CEMS span value is 500 ppm [40 CFR 60.48(e)(2)(i)].

5. When NO_X emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 or 7A of appendix A to 40 CFR Part 60 or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days [40 CFR 60.48b(f)].

d. While combusting fuel oil, the permittee shall conduct a performance test using U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 and the procedures in 40 CFR 60.11 to demonstrate compliance with the applicable limit in 40 CFR 60.43b, and shall

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

comply with either 40 CFR 60.48b(a)(1), (2), or (3). The observation period for U.S. EPA Reference Method 9 of Appendix A-4 or 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation [40 CFR 60.48b(a)].

1. Except as provided in 40 CFR 60.48b(a)(2) and (a)(3), the permittee shall conduct subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests using the procedures in 40 CFR 60.48b(a) according to the applicable schedule in 40 CFR 60.48b(a)(1)(i) through (a)(1)(iv), as determined by the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test results [40 CFR 60.48b(a)(1)].

    i. If no visible emissions are observed, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.48b(a)(1)(i)]

    ii. If visible emissions are observed, but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.48b(a)(1)(ii)]

    iii. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or [40 CFR 60.48b(a)(1)(iii)]

    iv. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 test must be completed within 45 calendar days from the date that the most recent performance test was conducted [40 CFR 60.48b(a)(1)(iv)].

2. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests, elect to perform subsequent monitoring using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part 60 according to the procedures specified in 40 CFR 60.48b(a)(2)(i) and (ii) [40 CFR 60.48b(a)(2)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. The permittee shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part 60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the permittee shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observations (i.e. 90 seconds) or conduct a new U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test using the procedures in 40 CFR 60.48b(a) within 45 calendar days according to the requirements in 40 CFR 60.46d(d)(7). [40 CFR 60.48b(a)(2)(i)]

ii. If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed. [40 CFR 60.48b(a)(2)(ii)]

3. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in 40 CFR 60.48b(a)(2). For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. [40 CFR 60.47c(a)(3)]

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) each day. [40 CFR 60.49b(d)(1)]

b. The permittee shall maintain records of the following information for each steam generating unit operating day [40 CFR 60.49b(g)]:

1. Calendar date;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

3. The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

4. Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40 CFR Part 60.

c. For each performance test conducted using Method 9 of appendix A-4 of this part, the owner or operator shall keep the records including the information specified in 40 CFR 60.49 (f)(1)(i) through (iii) [40 CFR 60.49b(f)(1)]:

1. Dates and time intervals of all opacity observation periods [40 CFR 60.49b(f)(1)(i)];

2. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test [40 CFR 60.49b(f)(1)(ii)]; and

3. Copies of all visible emission observer opacity field data sheets [40 CFR 60.49b(f)(1)(iii)].

d. The permittee shall obtain and maintain at the affected facility fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

supplier that certify that the oil meets the definition of distillate oil and gaseous fuel meets the definition of natural gas as defined in 40 CFR 60.41b and the applicable sulfur limit. For the purposes of 40 CFR 60, Subpart Db the distillate oil need not meet the fuel nitrogen content specification in the definition of distillate oil [40 CFR 60.49b(r)(1)].

e. The permittee shall maintain records of all performance tests [40 CFR 60.49b, 401 KAR 52:020, Section 10].

f. All records required under 40 CFR 60.49b shall be maintained for a period of 2 years following the date of such record [40 CFR 60.49b(o)], and five years per **Section F - Monitoring, Recordkeeping, and Reporting Requirements 2**.

g. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information [40 CFR 63.11223(b)(6)]:

1. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of each boiler [40 CFR 63.11223(b)(6)(i)].

2. A description of any corrective actions taken as a part of the tune-up of each boiler [40 CFR 63.11223(b)(6)(ii)].

3. The type and amount of fuel used over the 12 months prior to the tune-up of each boiler. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

h. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

1. A copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted [40 CFR 63.11225(c)(1)].

2. Records to document conformance with the work practices, emission reduction measure, and management practices required by 40 CFR 63.11214 and 40 CFR 63.11223 as specified below [40 CFR 63.11225(c)(2)]:

i. Records shall identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

ii. Records of the monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that combusts ultra-low-sulfur diesel, the permittee shall keep records, on a monthly basis, of the type of fuel combusted [40 CFR 63.11225(c)(2)(iii)].

3. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment [40 CFR 63.11225(c)(4)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation [40 CFR 63.11225(c)(5)].

5. Records of all inspection and monitoring data required by 40 CFR 63.11221 and 63.11222, and the following information for each required inspection and monitoring [40 CFR 63.11225(c)(6)]:

   i. The date, place, and time of the monitoring event [40 CFR 63.11225(c)(6)(i)].

   ii. Person conducting the monitoring [40 CFR 63.11225(c)(6)(ii)].

   iii. Technique or method used [40 CFR 63.11225(c)(6)(iii)].

   iv. Operating conditions during the activity [40 CFR 63.11225(c)(6)(iv)].

   v. Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation [40 CFR 63.11225(c)(6)(v)].

   vi. Maintenance or corrective action taken (if applicable) [40 CFR 63.11225(c)(6)(vi)].

i. Records shall be in a form suitable and readily available for expeditious review. The permittee shall keep each record for 5 years following the date of each recorded action. The permittee shall keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The permittee may keep the records off site for the remaining 3 years. [40 CFR 63.11225(d)]

6. <u>Specific Reporting Requirements:</u>

a. The permittee shall calculate the annual capacity factor individually for natural gas and fuel oil for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)].

b. The permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include [40 CFR 60.49b(a)]:

   1. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; and

   2. The annual capacity factor at which the permittee anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee of each affected facility subject to the SO_2, PM, or NO_X emission limits under 40 CFR 60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B of 40 CFR Part 60 [40 CFR 60.49b(b)].

d. The permittee of each affected facility subject to the NO_X standard in 40 CFR 60.44b who seeks to demonstrate compliance with those standards through the monitoring of steam generating unit operating conditions in the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in 40 CFR 60.48b(g)(2) and the records to be maintained in 40 CFR 60.49b(g). This plan shall be submitted to the Administrator for approval within 360 days of the initial startup of the affected facility. If the plan is approved, the permittee shall maintain records of predicted nitrogen oxide emission rates and the monitored operating conditions, including steam generating unit load, identified in the plan. The plan shall [40 CFR 60.49b(c)]:

    1. Identify the specific operating conditions to be monitored and the relationship between these operating conditions and NO_X emission rates (*i.e.*, ng/J or lbs/MMBtu heat input). Steam generating unit operating conditions include, but are not limited to, the degree of staged combustion (*i.e.*, the ratio of primary air to secondary and/or tertiary air) and the level of excess air (*i.e.*, flue gas O_2 level) [40 CFR 60.49b(c)];

    2. Include the data and information that the permittee used to identify the relationship between NO_X emission rates and these operating conditions; and

    3. Identify how these operating conditions, including steam generating unit load, will be monitored under 40 CFR 60.48b(g) on an hourly basis by the permittee during the period of operation of the emission units; the quality assurance procedures or practices that will be employed to ensure that the data generated by monitoring these operating conditions will be representative and accurate; and the type and format of the records of these operating conditions, including steam generating unit load, that will be maintained by the permittee under 40 CFR 60.49b(g).

e. The permittee shall submit excess emission reports for any excess emissions that occurred during the reporting period [40 CFR 60.49b(h)]. For purposes of 40 CFR 60.48b(g)(1), excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under 40 CFR 60.46b(e), that exceeds the applicable emission limits in 40 CFR 60.44b [40 CFR 60.49b(h)(4)].

f. The permittee shall submit reports of the following information for each steam generating unit operating day [40 CFR 60.49b(i)]:

    1. Calendar date;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. The average hourly NO_X emission rates (expressed as NO_2) (ng/J or lb/MMBtu heat input) measured or predicted;

3. The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

4. Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

5. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

6. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

7. Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

8. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

9. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

10. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of 40 CFR Part 60.

g. The permittee may submit electronic quarterly reports for NO_X in lieu of submitting the written reports required under paragraphs 40 CFR 60.49b(h), (i), (j), (k) or (l). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of 40 CFR 60 Subpart Db was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format [40 CFR 60.49b(v)].

h. The reporting period for the reports required under 40 CFR 60, Subpart Db is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period [40 CFR 60.49b(w)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. Reports shall be submitted to the Administrator certifying that only very low sulfur oil meeting the definition in 40 CFR 60, Subpart Db, natural gas, wood, and/or other fuels that are known to contain insignificant amounts of sulfur were combusted in the affected facility during the reporting period [40 CFR 60.49b(r)(1)].

j. The permittee shall submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 of 40 CFR 63, Subpart JJJJJJ and that the assessment is an accurate depiction of the facility at the time of the assessment or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [40 CFR 63.11214(c)]

k. The permittee shall submit to the Administrator all of the notifications in 40 CFR 63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply within 120 days after the boilers become subject to the standard. [40 CFR 63.11225(a)(1) and (2)]

l. The permittee shall prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the company name and address and a statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The notification shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.11225(b)(1) and (2)]

    1. "This facility complies with the requirements in 40 CFR 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." [40 CFR 63.11225(b)(2)(i)]

    2. For units that do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.11225(b)(2)(ii)]

m. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements.**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 09, 10 and 82: Dual Fuel-Fired Indirect Heat Exchangers

Description:

EU 09 and EU 10 (Medical Center Boiler #3 and Boiler #4); EU 82 (Samaritan 03)

Maximum Continuous Rating (MMBtu/hr):	144 each (EU 9 & EU 10) 20.9 (EU 82)
Construction commenced:	Before 1970
Fuels:	Natural Gas & Ultra Low Sulfur Fuel Oil

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

1. **Operating Limitations:**
   a. The permittee shall meet the work practice standards established in 40 CFR Part 63, Table 2 to Subpart JJJJJJ, as established in 401 KAR 63:002, Section (2)(4)(jjjjj). [401 KAR 61:015, Section 9(2)(c)]

   b. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in 40 CFR 63.11223(b)(1) through (7). Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up shall conduct a tune-up of the boiler every 5 years as specified in 40 CFR 63.11223(c). [401 KAR 61:015, Section 9(2)(c); 40 CFR 63.11201(b) referencing Table 2, Item 4.; and 40 CFR 63.11223(b) and (c)]

      1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up [40 CFR 63.11223(b)]. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up [40 CFR 63.11223(c)]

      2. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

      3. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

      4. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(3)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

6. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

7. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 days of startup [40 CFR 63.11223(b)(7)].

Compliance Demonstration Method:
Initial compliance shall be demonstrated by performing a tune-up within 180 days of the effective date of the fuel switch. Notification of the change shall be submitted according to 40 CFR 63.11225(g). The permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that an initial tune-up was conducted on each boiler. [40 CFR 63.11210(i); and 40 CFR 63.11214(b)] Continuous compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements c. through e.** and **6. Specific Reporting Requirements c.**

c. The permittee shall have a one-time energy assessment performed by a qualified energy assessor within 180 days of the issuance of V-18-052 R1. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in Table 2 of 40 CFR 63, Subpart JJJJJJ satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008 and March 21, 2014 also satisfies the energy assessment requirements. The energy assessment shall include the following with extent of the evaluation for (1) to (4) of Item 16. in Table 2 of 40 CFR 63, Subpart JJJJJJ appropriate for the on-site technical hours listed in 40 CFR 63.11237 under *Energy Assessment*: [401 KAR 61:015, Section 9(2)(c); 40 CFR 63.11201(b), referencing Table 2, Item 16.]

1. A visual inspection of the boiler system;

2. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;

3. An inventory of major energy use systems consuming energy from affected boilers and which are under control of the boiler owner or operator;

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;

5. A list of major energy conservation measures that are within the facility's control;

6. A list of the energy savings potential of the energy conservation measures identified; and

7. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits and the time frame for recouping those investments.

Compliance Demonstration Method:
Compliance shall be demonstrated by **6. Specific Reporting Requirements a.**

d. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11205(a)]

Compliance Demonstration Method:
Compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d.4.**

e. See **Section D - Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

a. For EU 09 and 10, particulate emissions from each stack shall not exceed 0.29 lb/MMBtu [401 KAR 61:015, Section 4(1)], and for EU 82, particulate emissions from the stack shall not exceed 0.53 lb/MMBtu [401 KAR 61:015, Section 4(1)].

Compliance Demonstration Method:
Units are assumed to be in compliance with the 401 KAR 61:015 emission standard while combusting natural gas or fuel oil based on AP-42 emission factors.

b. Opacity emissions from each stack shall not exceed 40 percent opacity except that for emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions if the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 61:015, Section 4(1)(c) and 4(1)(c)3.].

Compliance Demonstration Method:

I. Units are assumed to be in compliance with the 401 KAR 61:015 emission standard while combusting natural gas.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

II. While combusting fuel oil, see **4. Specific Monitoring Requirements b.** and **5. Specific Recordkeeping Requirements b.**

c. For EU 09 and 10, sulfur dioxide emissions from each stack shall not exceed 4.0 lb/MMBtu [401 KAR 61:015, Section 5(1)], and for EU 82, sulfur dioxide emissions from the stack shall not exceed 4.97 lb/MMBtu [401 KAR 61:015, Section 5(1)].

Compliance Demonstration Method:
Units are considered in compliance with the 401 KAR 61:015 emission standards while combusting natural gas or fuel oil based on AP-42 emission factors.

d. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:
Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 50:045, Section 1 and 401 KAR 61:005, Section 2(2)].

4. Specific Monitoring Requirements:

a. The permittee shall monitor the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) on a monthly basis [401 KAR 52:020, Section 10; and 401 KAR 61:015, Section 6(5)].

b. While combusting fuel oil, the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen (not including condensed water in the plume), then the permittee shall determine the opacity using U.S. EPA Reference Method 9 of 40 CFR 60, Appendix A-4 [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain the records of the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) on a monthly basis. [401 KAR 52:020, Section 10; and 401 KAR 61:015, Section 6(5)].

b. The permittee shall maintain records of qualitative visual observations and any U.S. EPA Reference Method 9 tests performed [401 KAR 52:020, Section 10].

c. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information [40 CFR 63.11223(b)(6)]:

1. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of each boiler [40 CFR 63.11223(b)(6)(i)].

2. A description of any corrective actions taken as a part of the tune-up of each boiler [40 CFR 63.11223(b)(6)(ii)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. The type and amount of fuel used over the 12 months prior to the tune-up of each boiler. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

d. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

1. A copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted [40 CFR 63.11225(c)(1)].

2. Records to document conformance with the work practices, emission reduction measure, and management practices required by 40 CFR 63.11214 and 40 CFR 63.11223 as specified below [40 CFR 63.11225(c)(2)]:

i. Records shall identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

ii. Records of the monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that combusts ultra-low-sulfur diesel, the permittee shall keep records, on a monthly basis, of the type of fuel combusted [40 CFR 63.11225(c)(2)(iii)].

3. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment [40 CFR 63.11225(c)(4)].

4. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation [40 CFR 63.11225(c)(5)].

5. Records of all inspection and monitoring data required by 40 CFR 63.11221 and 63.11222, and the following information for each required inspection and monitoring [40 CFR 63.11225(c)(6)]:

i. The date, place, and time of the monitoring event [40 CFR 63.11225(c)(6)(i)].

ii. Person conducting the monitoring [40 CFR 63.11225(c)(6)(ii)].

iii. Technique or method used [40 CFR 63.11225(c)(6)(iii)].

iv. Operating conditions during the activity [40 CFR 63.11225(c)(6)(iv)].

v. Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation [40 CFR 63.11225(c)(6)(v)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

vi. Maintenance or corrective action taken (if applicable) [40 CFR 63.11225(c)(6)(vi)].

e. Records shall be in a form suitable and readily available for expeditious review. The permittee shall keep each record for 5 years following the date of each recorded action. The permittee shall keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The permittee may keep the records off site for the remaining 3 years. [40 CFR 63.11225(d)]

6. Specific Reporting Requirements:

a. The permittee shall submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 of 40 CFR 63, Subpart JJJJJJ and that the assessment is an accurate depiction of the facility at the time of the assessment or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [40 CFR 63.11214(c)]

b. The permittee shall submit to the Administrator all of the notifications in 40 CFR 63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply within 120 days after the boilers become subject to the standard. [40 CFR 63.11225(a)(1) and (2)]

c. The permittee shall prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the company name and address and a statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The notification shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.11225(b)(1) and (2)]

1. "This facility complies with the requirements in 40 CFR 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." [40 CFR 63.11225(b)(2)(i)]

2. For units that do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.11225(b)(2)(ii)]

d. The permittee shall calculate the annual capacity factor individually for natural gas and fuel oil for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]

e. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 20-21 and 57: Natural Gas-Fired Indirect Heat Exchangers

Description:
EU 20-21 (Bruce Poundstone Boilers – 2 in number)

Maximum Continuous Rating (MMBtu/hr):	2.5 each
Construction commenced:	before 1987
Primary fuel:	Natural Gas

Description:
Unit 57 (57) – Eleven Boilers used for Engineering Transportation (1), Nutter Field House (4), SAE fraternity (1), Boone Tennis Center (2), Building 200 (2) and Bosworth Hall (1)

Maximum Continuous Rating (MMBtu/hr):	Ranging between 1.0 & 9.0
Construction commenced:	between 1986-2002
Primary fuel:	Natural Gas

APPLICABLE REGULATIONS:
401 KAR 59:015, New indirect heat exchangers

NON-APPLICABLE REGULATIONS:
401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

1. **Operating Limitations:**
   a. The permittee shall comply with 401 KAR 50:055, Section 2(5) [401 KAR 59:015 Section 7(1)(a)].

   b. The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility [401 KAR 59:015, Section 7(1)(b)].

   c. All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods [401 KAR 59:015, Section 7(1)(c)].

   d. The actions, including duration of the startup period, of the permittee of each affected facility during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence [401 KAR 59:015, Section 7(1)(d)].

   e. Startups and shutdowns shall be conducted according to either the manufacturer's recommended procedures or recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee of the affected facility [401 KAR 59:015, Section 7(1)(e)1. and 2.]

   Compliance Demonstration Method for a through e:
   See **5. Specific Recordkeeping Requirements b**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a. For EU 20-21 particulate emissions from each stack shall not exceed 0.26 lb/MMBtu and for EU 57, particulate emissions from each stack shall not exceed 0.10 lb/MMBtu [401 KAR 59:015, Section 4(1)(b)].

b. Emissions shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:

1. A maximum of 27 percent opacity shall be allowed for one six minute period in any 60 consecutive minutes [401 KAR 59:015, Section 4(2)(a)]; and

2. For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

c. For EU 20-21 and EU 57 sulfur dioxide emissions from each unit shall not exceed 0.8 lb/MMBtu [401 KAR 59:015, Section 5(1)(b)].

Compliance Demonstration Method for a through c:
These units are considered in compliance with the PM, opacity and SO_2 emission standards while combusting natural gas.

d. See **Section D - Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

The permittee shall monitor the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 52:020, Section 10].

b. The permittee shall keep records of the manufacturer’s recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 22-48: Natural Gas-Fired Indirect Heat Exchangers

Description:

Twelve Natural Gas-Fired Boilers Ranging between 1 & 10 MMBtu/hr (Shawneetown Bldgs.)

Maximum Continuous Rating (MMBtu/hr):	1.25 each
Construction commenced:	before 1956
Fuel:	Natural Gas

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers

NON-APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

1. **Operating Limitations:**
   a. The permittee shall comply with 401 KAR 50:055, Section 2(5) [401 KAR 61:015 Section 9(1)(a)].

   b. The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility [401 KAR 61:015, Section 9(1)(b)].

   c. All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods [401 KAR 61:015, Section 9(1)(c)].

   d. The actions, including duration of the startup period, of the permittee during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence [401 KAR 61:015, Section 9(1)(d)].

   e. Startups and shutdowns shall be conducted according to either the manufacturer's recommended procedures or recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee of the affected facility [401 KAR 61:015, Section 9(1)(e)(1) and (2)]

   Compliance Demonstration Method for a through e:
   See **5. Specific Recordkeeping Requirements b**.

2. **Emission Limitations:**
   a. Particulate emissions from each stack shall not exceed 0.29 lb/MMBtu [401 KAR 61:015, Section 4].

   b. Emissions from each stack shall not exceed 40 percent opacity with respect to particulate matter based on a six-minute average [401 KAR 61:015, Section 4(3)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Emissions from an indirect heat exchanger shall not exceed 40 percent opacity based on a six minute average except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 61:015, Section 4(3)(c)].

d. Sulfur dioxide emissions from each unit shall not exceed 4.0 lb/MMBtu [401 KAR 61:015, Section 5(1)].

Compliance Demonstration Method for a through d:
These units are considered in compliance with the PM, opacity and SO_2 emission standards while combusting natural gas.

e. See **Section D - Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:
Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 50:045, Section 1 and 401 KAR 61:005, Section 2(2)].

4. Specific Monitoring Requirements:
The permittee shall monitor the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 61:015, Section 6].

b. The permittee shall keep records of the manufacturer’s recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:
See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 51, 83 and 84: Dual Fuel-Fired Indirect Heat Exchangers

Description:

EU 51 (Central Utility Plant Boiler #1); EU 83 and 84 (Samaritan 01 and 02)

Maximum Continuous Rating (MMBtu/hr):	72.3 (EU 51); 12.0 (EU 83) and 12.0 (EU 84)
Construction commenced:	EU 51 before 2004 EU 83 and 84 before 2006
Primary fuel:	Natural Gas
Secondary fuel:	#2 fuel oil
Control:	EU 51, low NOx burner

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005, Section 2(2)(d) 40 C.F.R. 60.40c to 60.48c (Subpart Dc), Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

PRECLUDED REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality.

1. **Operating Limitations:**
   a. The permittee shall meet the work practice standards established in 40 CFR 63, Table 2 to Subpart JJJJJJ, as established in 401 KAR 63:002, Section 2(4)(jjjjj). [401 KAR 59:015, Section 7(2)(c)]

   b. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in 40 CFR 63.11223(b)(1) through (7). Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up shall conduct a tune-up of the boiler every 5 years as specified in 40 CFR 63.11223(c). [401 KAR 59:015, Section 7(2)(c); 40 CFR 63.11201(b) referencing Table 2, Item 4.; and 40 CFR 63.11223(b) and (c)]

      1. Each biennial tune-up shall be conducted no more than 25 months after the previous tune-up [40 CFR 63.11223(b)]. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up [40 CFR 63.11223(c)]

      2. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

4. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(3)].

5. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

6. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

7. If the unit is not operating on the required date for a tune-up, the tune-up shall be conducted within 30 days of startup [40 CFR 63.11223(b)(7)].

Compliance Demonstration Method:
Initial compliance shall be demonstrated by performing a tune-up within 180 days of the effective date of the fuel switch. Notification of the change shall be submitted according to 40 CFR 63.11225(g). The permittee shall submit a signed statement in the Notification of Compliance Status report that indicates that an initial tune-up was conducted on each boiler. [40 CFR 63.11210(i); and 40 CFR 63.11214(b)] Continuous compliance shall be demonstrated according to **5. Specific Recordkeeping Requirements e. through g.** and **6. Specific Reporting Requirements d.**

c. The permittee shall have a one-time energy assessment performed by a qualified energy assessor within 180 days of the issuance of V-18-052 R1. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in Table 2 of 40 CFR 63, Subpart JJJJJJ satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008 and March 21, 2014 also satisfies the energy assessment requirements. The energy assessment shall include the following with extent of the evaluation for (1) to (4) of Item 16. in Table 2 of 40 CFR 63, Subpart JJJJJJ appropriate for the on-site technical hours listed in 40 CFR 63.11237 under *Energy Assessment*: [401 KAR 61:015, Section 9(2)(c); 40 CFR 63.11201(b), referencing Table 2, Item 16.]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. A visual inspection of the boiler system;

2. An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints;

3. An inventory of major energy use systems consuming energy from affected boilers and which are under control of the boiler owner or operator;

4. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;

5. A list of major energy conservation measures that are within the facility's control;

6. A list of the energy savings potential of the energy conservation measures identified; and

7. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits and the time frame for recouping those investments.

Compliance Demonstration Method:
Compliance shall be demonstrated by **6. Specific Reporting Requirements b.**

d. At all times, the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart JJJJJJ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [40 CFR 63.11205(a)]

Compliance Demonstration Method:
Compliance shall be demonstrated by **5. Specific Recordkeeping Requirements d.4.**

e. See **Section D - Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

a. For EU 51, particulate emissions from the stack shall not exceed 0.1 lb/ MMBtu, and for EU 83 and 84, particulate emissions from the stacks shall not exceed 0.39 lb/MMBtu. [401 KAR 59:015, Section 4(1)(c)]

Compliance Demonstration Method:
Units are considered in compliance with emission standard while combusting natural gas or fuel oil based on AP-42 emission factors or manufacturer specifications.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Opacity emissions from each stack shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:

1. A maximum of 27 percent opacity shall be allowed for one six minute period in any 60 consecutive minutes [401 KAR 59:015, Section 4(2)(a)];

2. For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

Compliance Demonstration Method:

I. Units are considered in compliance with the emission standard while combusting natural gas.
II. While combusting fuel oil, the units shall comply with **2. Emission Limitations c**.

c. While burning fuel oil, visible emissions shall not exceed 20 percent opacity, based on a 6-minute average, except for one 6-minute period per hour of not more than 27 percent opacity. The opacity standard under 40 CFR 60.43c applies at all times, except during periods of startup, shutdown, or malfunction. [40 CFR 60.43c(c) and (d); and 401 KAR 59:015, Section 4(2)(a)]

Compliance Demonstration Method:

I. For EU 51 compliance shall be demonstrated according to **3. Testing Requirements a., 4. Specific Monitoring Requirements b., 5. Specific Recordkeeping Requirements b.**, and **6. Specific Reporting Requirements a.**
II. For EU 83 and 84 compliance shall be demonstrated according to **4. Specific Monitoring Requirements c.** and **5. Specific Recordkeeping Requirements c.**

d. For EU 51, sulfur dioxide emissions from the stack shall not exceed 0.8 lb/MMBtu and for EU 83 and 84, sulfur dioxide emissions from each stack shall not exceed 4.97 lb/MMBtu [401 KAR 59:015, Section 5 (1)(b)].

Compliance Demonstration Method:

I. Units are considered in compliance with emission standards while combusting natural gas.
II. While combusting fuel oil, compliance shall be demonstrated by 2. Emission Limitations e.

e. While combusting fuel oil, SO_2 emissions shall not exceed 0.50 lb/MMBtu (215 ng/J); or, as an alternative, the permittee shall not combust liquid fuel that contains greater than 0.5 weight percent sulfur. The SO_2 standard under 40 CFR 60.42c applies at all times, including periods of startup, shutdown, and malfunction. [40 CFR 60.42c(d) and (i)]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance shall be determined based on a certification from the fuel supplier, as described under 40 CFR 60.48c(f). [40 CFR 60.42c(h)(1)] and **5. Specific Recordkeeping Requirements d**.

f. See **Section D - Source Emission Limitations and Testing Requirements**

3. Testing Requirements:

a. For EU 51, to determine compliance with the opacity limits under 40 CFR 60.43c (fuel oil), the permittee shall conduct an initial performance test as required under 40 CFR 60.8, and shall conduct subsequent performance tests as requested by the Administrator, using U.S. EPA Reference Method 9 of Appendix A of 40 CFR Part 60 [40 CFR 60.45c(a)].

b. Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 50:045, Section 1 and 401 KAR 59:005, Section 2(2)].

4. Specific Monitoring Requirements:

a. The permittee shall monitor the amount of natural gas combusted (in MMscf) and the amount of fuel oil combusted (in gallons) on a monthly basis. [40 CFR 60.48c(g)(2)]

b. For EU 51, while combusting fuel oil, the permittee shall conduct a performance test using U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 and the procedures in 40 CFR 60.11 to demonstrate compliance with the applicable limit in 40 CFR 60.43c, and shall comply with either 40 CFR 60.47c(a)(1), (2), or (3). The observation period for U.S. EPA Reference Method 9 of Appendix A-4 or 40 CFR Part 60 performance tests may be reduced from 3 hours to 60 minutes if all 6-minute averages are less than 10 percent and all individual 15-second observations are less than or equal to 20 percent during the initial 60 minutes of observation [40 CFR 60.47c(a)].

1. Except as provided in 40 CFR 60.47c(a)(2) and (a)(3), the permittee shall conduct subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests using the procedures in 40 CFR 60.47c(a) according to the applicable schedule in 40 CFR 60.47c(a)(1)(i) through (a)(1)(iv), as determined by the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test results [40 CFR 60.47c(a)(1)].

   i. If no visible emissions are observed, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 12 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.47c(a)(1)(i)]

   ii. If visible emissions are observed, but the maximum 6-minute average opacity is less than or equal to 5 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 6 calendar months from the date that the most recent performance test was conducted

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; [40 CFR 60.47c(a)(1)(ii)]

iii. If the maximum 6-minute average opacity is greater than 5 percent but less than or equal to 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test must be completed within 3 calendar months from the date that the most recent performance test was conducted or within 45 days of the next day that fuel with an opacity standard is combusted, whichever is later; or [40 CFR 60.47c(a)(1)(iii)]

iv. If the maximum 6-minute average opacity is greater than 10 percent, a subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 test must be completed within 45 calendar days from the date that the most recent performance test was conducted [40 CFR 60.47c(a)(1)(iv)].

2. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance tests, elect to perform subsequent monitoring using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part 60 according to the procedures specified in 40 CFR 60.47c(a)(2)(i) and (ii) [40 CFR 60.47c(a)(2)].

   i. The permittee shall conduct 10 minute observations (during normal operation) each operating day the affected facility fires fuel for which an opacity standard is applicable using U.S. EPA Reference Method 22 of Appendix A-7 of 40 CFR Part 60 and demonstrate that the sum of the occurrences of any visible emissions is not in excess of 5 percent of the observation period (i.e., 30 seconds per 10 minute period). If the sum of the occurrence of any visible emissions is greater than 30 seconds during the initial 10 minute observation, immediately conduct a 30 minute observation. If the sum of the occurrence of visible emissions is greater than 5 percent of the observation period (i.e., 90 seconds per 30 minute period), the permittee shall either document and adjust the operation of the facility and demonstrate within 24 hours that the sum of the occurrence of visible emissions is equal to or less than 5 percent during a 30 minute observations (i.e. 90 seconds) or conduct a new U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test using the procedures in 40 CFR 60.47c(a) within 45 calendar days according to the requirements in 40 CFR 60.45c(a)(8). [40 CFR 60.47c(a)(2)(i)]

   ii. If no visible emissions are observed for 10 operating days during which an opacity standard is applicable, observations can be reduced to once every 7 operating days during which an opacity standard is applicable. If any visible emissions are observed, daily observations shall be resumed. [40 CFR 60.47c(a)(2)(ii)]

3. If the maximum 6-minute opacity is less than 10 percent during the most recent U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60 performance test, the

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

permittee may, as an alternative to performing subsequent U.S. EPA Reference Method 9 of Appendix A-4 performance tests, elect to perform subsequent monitoring using a digital opacity compliance system according to a site-specific monitoring plan approved by the Administrator. The observations shall be similar, but not necessarily identical, to the requirements in 40 CFR 60.47c(a)(2). For reference purposes in preparing the monitoring plan, see OAQPS "Determination of Visible Emission Opacity from Stationary Sources Using Computer-Based Photographic Analysis Systems." This document is available from the U.S. Environmental Protection Agency (U.S. EPA); Office of Air Quality and Planning Standards; Sector Policies and Programs Division; Measurement Policy Group (D243-02), Research Triangle Park, NC 27711. This document is also available on the Technology Transfer Network (TTN) under Emission Measurement Center Preliminary Methods. [40 CFR 60.47c(a)(3)]

c. For EU 83 and 84, while combusting fuel oil, the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are observed (not including condensed water in the plume), then the permittee shall determine the opacity using U.S. EPA Reference Method 9 of 40 CFR 60, Appendix A-4 [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf), and the amount of fuel oil combusted (in gallons) on a monthly basis. [40 CFR 60.48c(g)(2)]

b. The permittee shall maintain records according to the requirements specified in 40 CFR 60.48c(c)(1) through (3), as applicable to the visible emissions monitoring method used for compliance with 40 CFR 60, Subpart Dc [40 CFR 60.48c(c)].

1. For each performance test conducted using U.S. EPA Reference Method 9 of Appendix A-4 of 40 CFR Part 60, the permittee shall keep the records including the information specified in paragraphs 40 CFR 60.48c(c)(1)(i) through (iii) [40 CFR 60.48c(c)(1)].

i. Dates and time intervals of all opacity observation periods [40 CFR 60.48c(c)(1)(i)];

ii. Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test [40 CFR 60.48c(c)(1)(ii)]; and

iii. Copies of all visible emission observer opacity field data sheets [40 CFR 60.48c(c)(1)(iii)];

2. For each performance test conducted using U.S. EPA Reference Method 22 of Appendix A-4 of 40 CFR Part 60, the permittee shall keep the records including the information specified in 40 CFR 60.48c(c)(2)(i) through (iv) [40 CFR 60.48c(c)(2)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

i. Dates and time intervals of all visible emission observation periods [40 CFR 60.48c(c)(2)(i)];

ii. Name and affiliation for each visible emission observer participating in the performance test [40 CFR 60.48c(c)(2)(ii)];

iii. Copies of all visible emission observer opacity field data sheets [40 CFR 60.48c(c)(2)(iii)]; and

iv. Documentation of any adjustments made and the time the adjustments were completed to the affected facility operation by the permittee to demonstrate compliance with the applicable monitoring requirements [40 CFR 60.48c(c)(2)(iv)].

3. For each digital opacity compliance system, the permittee shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Administrator [40 CFR 60.48c(c)(3)].

c. The permittee shall maintain records of qualitative visual observations and any U.S. EPA Reference Method 9 tests performed [401 KAR 52:020, Section 10].

d. The permittee shall maintain records of fuel supplier certification for fuel oil that includes the following information [40 CFR 60.48c(f)]

1. The name of the oil supplier;

2. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR 60.41c; and

3. The sulfur content or maximum sulfur content of the oil.

e. The permittee shall maintain on-site and submit, if requested by the Administrator, a report containing the following information [40 CFR 63.11223(b)(6)]:

1. The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of each boiler [40 CFR 63.11223(b)(6)(i)].

2. A description of any corrective actions taken as a part of the tune-up of each boiler [40 CFR 63.11223(b)(6)(ii)].

3. The type and amount of fuel used over the 12 months prior to the tune-up of each boiler. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

f. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. A copy of each notification and report that was submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status that was submitted [40 CFR 63.11225(c)(1)].

2. Records to document conformance with the work practices, emission reduction measure, and management practices required by 40 CFR 63.11214 and 40 CFR 63.11223 as specified below [40 CFR 63.11225(c)(2)]:

   i. Records shall identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

   ii. Records of the monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that combusts ultra-low-sulfur diesel, the permittee shall keep records, on a monthly basis, of the type of fuel combusted [40 CFR 63.11225(c)(2)(iii)].

3. Records of the occurrence and duration of each malfunction of the boiler, or of the associated air pollution control and monitoring equipment [40 CFR 63.11225(c)(4)].

4. Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in 40 CFR 63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation [40 CFR 63.11225(c)(5)].

5. Records of all inspection and monitoring data required by 40 CFR 63.11221 and 63.11222, and the following information for each required inspection and monitoring [40 CFR 63.11225(c)(6)]:

   i. The date, place, and time of the monitoring event [40 CFR 63.11225(c)(6)(i)].

   ii. Person conducting the monitoring [40 CFR 63.11225(c)(6)(ii)].

   iii. Technique or method used [40 CFR 63.11225(c)(6)(iii)].

   iv. Operating conditions during the activity [40 CFR 63.11225(c)(6)(iv)].

   v. Results, including the date, time, and duration of the period from the time the monitoring indicated a problem to the time that monitoring indicated proper operation [40 CFR 63.11225(c)(6)(v)].

   vi. Maintenance or corrective action taken (if applicable) [40 CFR 63.11225(c)(6)(vi)]

g. Records shall be in a form suitable and readily available for expeditious review. The permittee shall keep each record for 5 years following the date of each recorded action. The permittee shall keep each record on-site or be accessible from a central location by

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. The permittee may keep the records off site for the remaining 3 years. [40 CFR 63.11225(d)]

6. Specific Reporting Requirements:

a. The permittee shall submit excess emission reports for any emissions in excess of the 40 CFR 60.43c(c) opacity limit that occur during the reporting period. The permittee shall submit reports including fuel oil fuel supplier certifications with a statement signed by the permittee that the records of fuel supplier certification submitted represent all of the fuel oil combusted during the reporting period. [40 CFR 60.48c(c) and (e)]

b. The permittee shall submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 of 40 CFR 63, Subpart JJJJJJ and that the assessment is an accurate depiction of the facility at the time of the assessment or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended. [40 CFR 63.11214(c)]

c. The permittee shall submit to the Administrator all of the notifications in 40 CFR 63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply within 120 days after the boilers become subject to the standard. [40 CFR 63.11225(a)(1) and (2)]

d. The permittee shall prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the company name and address and a statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The notification shall include the following certification(s) of compliance, as applicable, and signed by a responsible official: [40 CFR 63.11225(b)(1) and (2)]

1. "This facility complies with the requirements in 40 CFR 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler." [40 CFR 63.11225(b)(2)(i)]

2. For units that do not qualify for a statutory exemption as provided in Section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit." [40 CFR 63.11225(b)(2)(ii)]

e. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 87: Natural Gas-Fired Indirect Heat Exchanger

Description

Distillery Boiler at the James B. Beam Institute for Kentucky Spirits

Maximum Continuous Rating:	2.929 MMBtu/hr
Construction commenced:	May 28, 2021
Fuel:	Natural Gas

APPLICABLE REGULATION:

401 KAR 59:015, New indirect heat exchangers

1. **Operating Limitations:**
   a. The permittee shall comply with 401 KAR 50:055, Section 2(5) [401 KAR 59:015 Section 7(1)(a)].

   b. The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility [401 KAR 59:015, Section 7(1)(b)].

   c. All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods [401 KAR 59:015, Section 7(1)(c)].

   d. The actions, including duration of the startup period, of the permittee of each affected facility during startup periods and shutdown periods, shall be documented by signed, contemporaneous logs or other relevant evidence [401 KAR 59:015, Section 7(1)(d)].

   e. Startups and shutdowns shall be conducted according to either the manufacturer's recommended procedures or recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee of the affected facility [401 KAR 59:015, Section 7(1)(e)1. and 2.]

   Compliance Demonstration Method for a through e:
   See **5. Specific Recordkeeping Requirements b.**

2. **Emission Limitations:**
   a. Particulate emissions shall not exceed 0.10 lb/MMBtu [401 KAR 59:015, Section 4(1)(b)].

   b. Emissions shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:

      1. A maximum of 27 percent opacity shall be allowed for one six minute period in any sixty consecutive minute [401 KAR 59:015, Section 4(2)(a)]; and

      2. For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu [401 KAR 59:015, Section 5(1)(b)1.].

Compliance Demonstration Method for a through c:
Compliance is assumed with the applicable 401 KAR 59:015 PM, opacity and SO_2 emission standards while combusting natural gas.

d. See **Section D - Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:
Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:
The permittee shall monitor the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:
a. The permittee shall maintain records of the amount of natural gas combusted (in MMscf) on a monthly basis [401 KAR 52:020, Section 10].

b. The permittee shall keep records of the manufacturer's recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:
See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 07 and 08: Two Coal-Fired Indirect Heat Exchangers

Description:

(Medical Center Boiler #1 and #2)	
Maximum Continuous Rating (MMBtu/hr):	75.0 each boiler (EU 07 & 08)
Construction commenced:	before 1958
Primary fuel:	Coal
Control Device:	Cyclone integral to operation

APPLICABLE REGULATIONS:

401 KAR 61:015, Existing indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

NON-APPLICABLE REGULATIONS:

40 CFR Part 64, Compliance assurance monitoring (CAM).

PRECLUDED REGULATIONS:

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

1. **Operating Limitations:**
   a. The permittee shall minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, the permittee shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [401 KAR 61:015, Section 9(2)(c); and 40 CFR 63.11201(b) referencing Table 2, Item 1.]

      Compliance Demonstration Method:
      The permittee shall include a signed statement that this requirement was met in the Notification of Compliance Status Report [40 CFR 63.11223(g)]. See **5. Specific Recordkeeping Requirements b**.

   b. To preclude the applicability of 401 KAR 51:017 and 40 CFR 63, Subpart DDDDD, to satisfy 40 CFR 63, Subpart JJJJJJ, the facility shall comply with the emission limitations set forth in **Section D - Source Emission Limitations and Testing Requirements** for hydrogen chloride (HCl) and total HAPS.

      Compliance Demonstration Method:
      See **4. Specific Monitoring Requirements d**. and **5. Specific Recordkeeping Requirements d**.

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c. The permittee shall have a one-time energy assessment of the boiler performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to 4- CFR 63 Subpart JJJJJJ satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in 40 CFR 63.11237. [401 KAR 61:015, Section 9(2)(c); and 40 CFR 63.11201(b), referencing Table 2, Item 16.].

Compliance Demonstration Method:
See **6. Specific Reporting Requirements d. and f.**

d. The permittee at all times must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source [40 CFR 63.11205(a)].

e. The permittee must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or a continuous monitoring system (CMS), including a continuous emission monitoring system (CEMS), a continuous opacity monitoring system, or a continuous parameter monitoring system (CPMS) where applicable. The permittee may demonstrate compliance with the applicable mercury emission limit using fuel analysis if the emission rate calculated according to 40 CFR 63.11211(c) is less than the applicable emission limit. Otherwise, the permittee must demonstrate compliance using stack testing [40 CFR 63.11205(b)].

f. For existing affected boilers that have applicable work practice standards, management practices, or emission reduction measures, demonstrate initial compliance no later than March 21, 2014 and according to the applicable provisions in 40 CFR 63.7(a)(2), except as provided in paragraph (j) of 40 CFR 63.11210 [40 CFR63.11210(c)]

g. The permittee must comply with each operating limit specified in Table 3 (Operating Limits for Boilers with Emission Limits) to 40 CFR 63 Subpart JJJJJJ that applies to the boiler [40 CFR 63.11201(c), referencing Table 3, Item 5.].

Compliance Demonstration Method:

I. The permittee shall demonstrate initial compliance no later than the compliance date that is specified in 40 CFR 63.11196 (1) of March 21, 2014 and according to the applicable provisions in 40 CFR 63.7(a)(2) [40 CFR 63.11210(c)].
II. See **6. Specific Reporting Requirements g**.

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2. Emission Limitations:

a. Particulate emissions from the stack shall not exceed 1.09 lb/MMBtu. The permittee may measure compliance with the particulate allowable by calculating the emissions using the following formula [401 KAR 61:015, Section 4(1)(a)].

Compliance Demonstration Method:
Particulate Emission Rate = [EF] / [coal heating value (MMBtu/ton)]

Where the average controlled emission factor (EF) for EU 07 and EU 08 are from the most recent PM stack test approved by the Division.

b. Opacity emissions from the stack shall not exceed forty (40) percent except that for stoker fired indirect heat exchangers, a maximum of sixty percent opacity shall be permissible for not more than six consecutive minutes in any sixty consecutive minutes during cleaning the fire box or blowing soot [401 KAR 61:015, Section 4(1)(c) and 4(1)(c)2.]. Emissions from an indirect heat exchanger during building a new fire for the period required to ring the boiler up to operating conditions if the method used is that recommended y the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 61:015, Section 4(1)(c)3.].

Compliance Demonstration Method:
See **3. Testing Requirements b., 4. Specific Monitoring Requirements c. and 5. Specific Recordkeeping Requirements a.**

c. The sulfur dioxide emissions from the stack shall not exceed 6.0 lb/MMBtu. The permittee may measure compliance with the sulfur dioxide allowable by calculating the emissions using the following formula [401 KAR 61:015, Section 5(1)]:

Compliance Demonstration Method:
Sulfur Dioxide Emission Rate = [38**S** (lb/ton)] / [coal heating value (MMBtu/ton)]

Where **S** = % Sulfur

d. Mercury emissions shall not exceed 2.2E-05 lb/MMBtu of heat input [40 CFR 63.11201(a), referencing Item 6.a. of Table 1. of 40 CFR 63, Subpart JJJJJJ]. The permittee shall achieve compliance with this standard no later than one-hundred-eighty (180) days after the date specified in 40 CFR 63.11196(a)(2) [40 CFR 63.11210(b)].

Compliance Demonstration Method:
The permittee shall meet the requirements of 40 CFR 63.11222(a). The permittee shall demonstrate compliance with the mercury emission limit either by:

I. by stack testing according to **3. Testing Requirements c**.
II. or fuel analysis according to **3. Testing Requirements d** and **4. Specific Monitoring Requirements f.**
III. If the permittee chooses to demonstrate compliance with fuel analysis, the permittee shall maintain the fuel type or fuel mixture, by annual average, such that the mercury

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

emission rate calculated according to 40 CFR 63.11211(c) is less than the emission limit for mercury given above [40 CFR 63.11201(c), referencing Item 6. of Table 3., and Item 6.a. of Table 7. of 40 CFR 63 Subpart JJJJJJ].

e. CO emissions shall not exceed 420 ppm by volume on a dry basis corrected to 3 percent oxygen. [Referencing Item 6.c. of Table 1. of 40 CFR 63, Subpart JJJJJJ]. The permittee shall achieve compliance with this standard no later than one-hundred-eighty (180) days after the date specified in 40 CFR 63.11196(a)(2) [40 CFR 63.11210(b) and 40 CFR 63.11201(a)].

Compliance Demonstration Method:
The permittee shall demonstrate compliance with the CO emission limit by stack testing according to **3. Testing Requirements e.**

I. The permittee shall install, operate, and maintain a continuous monitoring system (CMS) for oxygen according to **4. Specific Monitoring Requirements g**.
II. The permittee shall maintain the oxygen level at or above the lowest one (1) hour average oxygen level measured during the most recent CO performance stack test [40 CFR 63.11201, referencing Item 8. of Table 3. of 40 CFR 63 Subpart JJJJJJ, and 40 CFR 63.11222, referencing Item 7. of Table 7. of 40 CFR 63 Subpart JJJJJJ].
III. The permittee must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to 40 CFR 63 Subpart JJJJJJ that applies according to the methods specified in table 7 to 40 CFR 63 Subpart JJJJJJ and to paragraphs (a)(1) through (4) of 40 CFR 63.11222 [40 CFR 63.11222].

f. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

a. The permittee shall conduct performance tests for particulate emissions using U.S. EPA Reference Method 5 and for HCl using U.S. EPA Reference Method 26 before the start of the fourth year of the issuance date of the final permit V-18-052 to demonstrate compliance with the applicable standard. The permittee shall submit a schedule within six months from the date of the third year issuance of the final permit to conduct at least one performance test for PM [401 KAR 50:045]. Upon completion of this test, PM and HCl tests shall occur every five years thereafter.

b. When the unit is in operation, the permittee shall read, weather permitting, the opacity of emissions from the stack using U.S. EPA Reference Method 9 once per week [401 KAR 50:045].

c. Stack testing for mercury, if required for compliance with **2. Emission Limitations d.**, shall be performed according to Item 2. of Table 4. of 40 CFR 63, Subpart JJJJJJ [40 CFR 63.11205(b) and 40 CFR 63.11210(a)].

1. The stack testing shall be performed according to 40 CFR 63.11212.

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2. Subsequent stack tests must be conducted on a triennial basis, unless permitted otherwise by 40 CFR 63.11220.

d. Fuel analysis for mercury, if possible for compliance with the mercury emission limitation, shall be performed according to the procedures of 40 CFR 63.11211(c) and 40 CFR 63.11213.

e. Stack testing for CO shall be performed according to Item 3. of Table 4. of 40 CFR 63, Subpart JJJJJJ [40 CFR 63.11210(a)].

1. The stack testing shall be performed according to 40 CFR 63.11212.

2. The stack testing shall establish a unit-specific limit for a minimum oxygen level according to Item 3. of Table 6. of 40 CFR 63, Subpart JJJJJJ and 40 CFR 63.11211(a).

3. Subsequent stack tests must be conducted on a triennial basis, unless permitted otherwise by 40 CFR 63.11220.

f. For boilers that demonstrate compliance with a performance stack test, the permittee shall maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. [Referencing Item 7. of Table 3. of 40 CFR 63, Subpart JJJJJJ and 40 CFR 63.11201].

g. If a performance stack test is required, the permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin [40 CFR 63.11225(a)(3)].

4. Specific Monitoring Requirements:

a. Monitoring of operations for sulfur dioxide emissions shall be conducted by representative sampling and analysis of fuel monthly. Records of the fuel sampling and analysis and sulfur and heat content shall be maintained for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 61:015, Section 6 (6)].

b. The rate of fuel combustion shall be recorded at least monthly. The heating value and ash content of fuels shall be ascertained per delivered shipment [401 KAR 61:015, Section 6 (3)].

c. To meet the periodic monitoring requirement for opacity, the permittee shall comply with reading the opacity weekly according to **3. Testing Requirements b.** of this permit. Excluding the startup and shut down periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and boiler system and make any necessary repairs. If a U.S. EPA Reference Method 9 cannot be performed, the reason for not performing the test shall be documented [401 KAR 52:020, Section 10].

d. The permittee shall monitor the fuel usage (in tons/hr) of each unit and determine the HCl emissions from each unit on a weekly basis. HCl emissions shall be determined based on

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

the equation listed in **Section D - Source Emission Limitations and Testing Requirements 10** [401 KAR 52:020, Section 10].

e. The permittee shall adhere to the minimum requirements of 40 CFR 63.11221.

f. If the permittee chooses to demonstrate compliance with the mercury emission limit, by fuel analysis, then the permittee shall maintain records of the mercury content and amount of all coal burned in the boiler according to 40 CFR 63.11222(a)(2) and (3) [40 CFR 63.11222].

g. The permittee, since the boiler is subject to a CO emission limit in Table 1 to 40 CFR 63 Subpart JJJJJJ, must either install, operate, and maintain a CEMS for CO and oxygen according to the procedures in paragraphs (a)(1) through (6) of 40 CFR 63.11224 (40 CFR 63.11224), or install, calibrate, operate, and maintain an oxygen analyzer system, as defined in 40 CFR 63.11237, according to the manufacturer's recommendations and paragraphs (a)(7) and (d) of 40 CFR 63.11224 (40 CFR 63.11224), as applicable, by the compliance date specified in 40 CFR 63.11196. Where a certified CO CEMS is used, the CO level shall be monitored at the outlet of the boiler, after any add-on controls or flue gas recirculation system and before release to the atmosphere. Boilers that use a CO CEMS are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in 40 CFR 63.11211(a) of 40 CFR 63 Subpart JJJJJJ. [Referencing Item 6. of Table 1. of 40 CFR 63 Subpart JJJJJJ and 40 CFR 63.11224].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the results of the weekly opacity observations and any U.S. EPA Reference Method 9 test [401 KAR 52:020, Section 10].

b. The permittee shall keep records of the manufacturer’s recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken [401 KAR 52:020, Section 10].

c. The permittee shall maintain records of the control equipment maintenance [401 KAR 52:020, Section 10].

d. Records of fuel usage, HCl emissions calculated, the sulfur content, and heat content of monthly coal analysis of bulk coal samples shall be maintained by the permittee [401 KAR 52:020, Section 10].

e. Records, including those documenting the results of each compliance test, shall be kept [401 KAR 52:020, Section 10].

f. The permittee shall maintain the records specified in 40 CFR 63.11225(c) [40 CFR 63.11225].

1. The records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1).

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for five (5) years following the date of each recorded action.

3. The permittee shall keep each record onsite for at least two (2) years after the date of each recorded action according to 40 CFR 63.10(b)(1).

4. The permittee must keep the record; according to requirements of 40 CFR 63.11225(c) and (d).

g. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

6. Specific Reporting Requirements:

a. The permittee shall report the fuel usage, sulfur content, and heat content [401 KAR 52:020, Section 10].

b. The permittee shall report the number of excursions (excluding startup, shutdown, and malfunction data) above the opacity standard, date and time of excursions, opacity value of the excursions, and percentage of the opacity data showing excursions above the opacity standard in each calendar quarter [401 KAR 52:020, Section 10].

c. The permittee shall report the number of excursions above the sulfur dioxide standard, date of excursions, value of the excursions, and percentage of the sulfur dioxide data showing excursions from emission limitation in each calendar quarter [401 KAR 52:020, Section 10].

d. The permittee shall submit a signed certification in the Notification of Compliance Status report that an energy assessment of each applicable boiler and its energy use systems was completed and submit, upon request, the energy assessment report [40 CFR 63.11214(c)].

e. The permittee shall report each instance in which the permittee did not meet each applicable emission limit and operating limit from Tables 1 and 3 of 40 CFR 63 Subpart JJJJJJ, according to the requirements in 40 CFR 63.11225 [40 CFR 63.11222(b)].

f. The permittee shall submit initial notifications, notifications of intent to conduct a performance test, and notifications of compliance status as required in 40 CFR 63.11225(a), and annual compliance certification reports as required in 40 CFR 63.11225(b) [40 CFR 63.11225(a) and 40 CFR 63.11225(b)].

g. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63 Subpart JJJJJJ, the permittee shall submit the results of the performance tests, including any associated fuel analyses, required by 40 CFR 63 Subpart JJJJJJ following the procedure specified in 40 CFR 63.11225(e)(1)(i) or (ii). [40 CFR 63.11225(e)(1)]

1. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*https://www3.epa.gov/ttn/chief/ert/ert_info.html*) at the time of the test, the permittee

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

shall submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data shall be submitted in a file format generated through the use of the EPA's ERT or an alternative electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier. [40 CFR 63.11225(e)(1)(i)]

2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.11225(e)(1)(ii)]

h. See **Section D - Source Emission Limitations and Testing Requirements** and **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

7. Specific Control Equipment Operating Conditions:

a. The cyclones shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and/or standard operating practices [401 KAR 50:055].

b. Records regarding the maintenance of the control equipment shall be maintained [401 KAR 52:020, Section 10].

c. See **Section E - Source Control Equipment Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 13: Two Coal-Fired Indirect Heat Exchangers

Description:

(Central Boiler #4 and #5)
Maximum Continuous Rating (MMBtu/hr): 93.75 each (EU 13-1 & EU 13-2)
Construction commenced: before 1977
Primary fuel: Coal
Control Device: Cyclone integral to operation

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 63:002, Section 2(4)(jjjjj) 40 C.F.R. 63.11193 to 63.11237, Tables 1 to 8 (Subpart JJJJJJ), National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

NON-APPLICABLE REGULATIONS:

40 CFR Part 64, Compliance assurance monitoring (CAM).

PRECLUDED REGULATIONS:

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

1. **Operating Limitations:**
   a. The permittee shall minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, the permittee shall follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available. [401 KAR 59:015, Section 7(2)(c); and 40 CFR 63.11201(b) referencing Table 2, Item 1.]

      Compliance Demonstration Method:
      The permittee shall include a signed statement that this requirement was met in the Notification of Compliance Status Report [40 CFR 63.11223(g)]. See **5. Specific Recordkeeping Requirements b**.

   b. To preclude the applicability of 401 KAR 51:017 and 40 CFR 63 Subpart DDDDD, to satisfy 40 CFR 63 Subpart JJJJJJ, the facility shall comply with the emission limitations set forth in **Section D - Source Emission Limitations and Testing Requirements** for hydrogen chloride (HCl) and total HAPS

      Compliance Demonstration Method:
      See **4. Specific Monitoring Requirements d** and **5. Specific Recordkeeping Requirements d**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall have a one-time energy assessment of the boiler performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to 40 CFR 63 Subpart JJJJJJ satisfies the energy assessment requirement. A facility that operates under an energy management program compatible with ISO 50001 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in 40 CFR 63.11237 [401 KAR 59:015, Section 7(2)(c); and 40 CFR 63.11201(b), referencing Table 2, Item 16]

Compliance Demonstration Method:
See **6. Specific Reporting Requirements f and h**.

d. The permittee at all times must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source [40 CFR 63.11205(a)].

e. The permittee must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or a continuous monitoring system (CMC), including a continuous emission monitoring system (CEMS), a continuous opacity monitoring system, or a continuous parameter monitoring system (CPMS) where applicable. The permittee shall demonstrate compliance with the applicable mercury emission limit using fuel analysis if the emission rate calculated according to 40 CFR 63.11211(c) is less than the applicable emission limit. Otherwise, the permittee shall demonstrate compliance using stack testing [40 CFR 63.11205(b)].

f. For existing affected boilers that have applicable work practice standards, management practices, or emission reduction measures, The permittee shall demonstrate initial compliance no later than March 21, 2014 and according to the applicable provisions in 40 CFR 63.7(a)(2), except as provided in paragraph (j) of 40 CFR 63.11210 (c) [40 CFR 63.11210 (c)].

g. The permittee must comply with each operating limit specified in Table 3 (Operating Limits for Boilers with Emission Limits) to 40 CFR 63 Subpart JJJJJJ that applies to the boiler. [Referencing Item 5. of Table 3. of 40 CFR 63 Subpart JJJJJJ and 40 CFR 63.11201(c)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

I. The permittee shall demonstrate initial compliance no later than the compliance date that is specified in 40 CFR 63.11196 (1) of March 21, 2014 and according to the applicable provisions in 40 CFR 63.7(a)(2) [40 CFR 63.11210(c)].

II. See 6. Specific Reporting Requirements **f**.

2. Emission Limitations:

a. Particulate emissions from each stack shall not exceed 0.20 lb/MMBtu. The permittee may measure compliance with the particulate allowable by calculating the emissions using the following formula [401 KAR 59:015, Section 4(1)(c)]:

Compliance Demonstration Method:
Particulate Emission Rate = [EF] / [coal heating value (MMBtu/ton)]

Where the controlled emission factor (EF) for EU 13-1 and EU 13-2 are from the most recent PM stack test approved by the Division.

b. The opacity emissions from each stack shall not exceed twenty (20) percent except that a maximum of forty percent opacity shall be permissible for not more than six consecutive minutes in any sixty consecutive minutes during cleaning the fire box or blowing soot [401 KAR 59:015, Section 4(2) and 4(2)(b)]. Emissions from an indirect heat exchanger shall not exceed 20 percent opacity based on a six minute average except during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations 401 KAR 59:015, Section 4(2)(c).

Compliance Demonstration Method:
See **3. Testing Requirements b**., **4. Specific Monitoring Requirements c** and **5. Specific Recordkeeping Requirements a.**

c. The sulfur dioxide emissions from each stack shall not exceed 1.20 lb/MMBtu. The permittee may measure compliance with the sulfur dioxide allowable by calculating the emissions using the following formula [401 KAR 59:015, Section 5(1)]:

Compliance Demonstration Method:
Sulfur Dioxide Emission Rate = [38**S** (lb/ton)] / [coal heating value (MMBtu/ton)]

Where **S**=% Sulfur

d. Mercury emissions shall not exceed 2.2E-05 lb/MMBtu of heat input [40 CFR 63.11201(a), referencing Item 6.a. of Table 1. of 40 CFR 63, Subpart JJJJJJ]. The permittee shall achieve compliance with this standard no later than one-hundred-eighty (180) days after the date specified in 40 CFR 63.11196(a)(2) [40 CFR 63.11210(b)].

Compliance Demonstration Method:
The permittee shall meet the requirements of 40 CFR 63.11222(a). The permittee shall demonstrate compliance with the mercury emission limit either by:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

I. Stack testing according to **3. Testing Requirements c** or;
II. Fuel analysis according to **3. Testing Requirements d** and **4. Specific Monitoring Requirements f.**
III. If the permittee chooses to demonstrate compliance with fuel analysis, the permittee shall maintain the fuel type or fuel mixture, by annual average, such that the mercury emission rate calculated according to 40 CFR 63.11211(c) is less than the emission limit for mercury given above [40 CFR 63.11201(c), referencing Item 6. of Table 3., and Item 6.a. of Table 7. of 40 CFR 63 Subpart JJJJJJ].

e. CO emissions shall not exceed 420 ppm by volume on a dry basis corrected to 3 percent oxygen. [Referencing Item 6.b. of Table 1. of 40 CFR 63 Subpart JJJJJJ]. The permittee shall achieve compliance with this standard no later than one-hundred-eighty (180) days after the date specified in 40 CFR 63.11196(a)(2) [40 CFR 63.11210(b) and 40 CFR 63.11201(a)].

Compliance Demonstration Method:
The permittee shall demonstrate compliance with the CO emission limit by stack testing according to **3. Testing Requirements e**.

I. The permittee shall install, operate, and maintain a continuous monitoring system (CMS) for oxygen according to **4. Specific Monitoring Requirements g**.
II. The permittee shall maintain the oxygen level at or above the lowest one (1) hour average oxygen level measured during the most recent CO performance stack test [40 CFR 63.11201, referencing Item 8. of Table 3. of 40 CFR 63, Subpart JJJJJJ, and 40 CFR 63.11222, referencing Item 7. of Table 7. of 40 CFR 63, Subpart JJJJJJ].
III. The permittee must demonstrate continuous compliance with each emission limit and operating limit in Tables 1 and 3 to 40 CFR 63, Subpart JJJJJJ that applies according to the methods specified in table 7 to 40 CFR 63, Subpart JJJJJJ and to paragraphs (a)(1) through (4) of 40 CFR 63.11222 [40 CFR 63.11222].

f. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

a. The permittee shall conduct performance tests for particulate emissions using U.S. EPA Reference Method 5 and for HCl using U.S. EPA Method 26 before the start of the fourth year of the issuance date of the final permit V-18-052 to demonstrate compliance with the applicable standard. The permittee shall submit a schedule within six months from the date of the third year issuance of the final permit to conduct at least one performance test for PM [401 KAR 50:045]. Upon completion of this test, PM and HCl tests shall occur every five years thereafter.

b. When the unit is in operation, the permittee shall read, weather permitting, the opacity of emissions from each stack using EPA Reference Method 9 once per week [401 KAR 50:045]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. Stack testing for mercury, if required for compliance with Emission Limitation 2.e., shall be performed according to Item 2. of Table 4. of 40 CFR 63 Subpart JJJJJJ [40 CFR 63.11205(b) and 40 CFR 63.11210(a)].

1. The stack testing shall be performed according to 40 CFR 63.11212.

2. Subsequent stack tests must be conducted on a triennial basis, unless permitted otherwise by 40 CFR 63.11220.

d. Fuel analysis for mercury, if possible for compliance with the mercury emission limitation, shall be performed according to the procedures of 40 CFR 63.11211(c) and 40 CFR 63.11213.

e. Stack testing for CO shall be performed according to Item 3. of Table 4. of 40 CFR 63 Subpart JJJJJJ [40 CFR 63.11210(a)].

1. The stack testing shall be performed according to 40 CFR 63.11212.

2. The stack testing shall establish a unit-specific limit for a minimum oxygen level according to Item 3. of Table 6. of 40 CFR 63 Subpart JJJJJJ, 40 CFR 63.11211(a).

3. Subsequent stack tests must be conducted on a triennial basis, unless permitted otherwise by 40 CFR 63.11220.

f. For boilers that demonstrate compliance with a performance stack test, the permittee shall maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test. [Referencing Item 7. of Table 3. of 40 CFR 63, Subpart JJJJJJ and 40 CFR 63.11201].

g. If a performance stack test is required, the permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance stack test is scheduled to begin [40 CFR 63.11225(a)(3)].

4. Specific Monitoring Requirements:

a. Monitoring of operations for sulfur dioxide emissions shall be conducted by representative sampling and analysis of fuel monthly. Records of the fuel sampling and analysis and sulfur and heat content shall be maintained for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:020, Section 10].

b. The rate of fuel combustion shall be recorded at least monthly. The heating value and ash content of fuels shall be ascertained per delivered shipment [401 KAR 52:020, Section 10].

c. To meet the periodic monitoring requirement for opacity, the permittee shall comply with reading the opacity weekly according to **3. Testing Requirements b**. Excluding the startup and shut down periods, if any six-minute average opacity value exceeds the opacity standard, the permittee shall, as appropriate, initiate an inspection of the control equipment

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

and boiler system and make any necessary repairs. If a Method 9 cannot be performed, the reason for not performing the test shall be documented [401 KAR 52:020, Section 10].

d. The permittee shall monitor the fuel usage (in tons/hr) of each unit and determine the HCl emissions from each unit on a weekly basis. HCl emissions shall be determined based on the equation listed in **Section D - Source Emission Limitations and Testing Requirements 10** [401 KAR 52:020, Section 10].

e. The permittee shall adhere to the minimum requirements of 40 CFR 63.11221.

f. If the permittee chooses to demonstrate compliance with the mercury emission limit, by fuel analysis, then the permittee shall maintain records of the mercury content and amount of all coal burned in the boiler according to 40 CFR 63.11222(a)(2) and (3) [40 CFR 63.11222].

g. The permittee, since the boiler is subject to a CO emission limit in Table 1 to 40 CFR 63 Subpart JJJJJJ, must either install, operate, and maintain a CEMS for CO and oxygen according to the procedures in paragraphs (a)(1) through (6) of 40 CFR 63.11224 (40 CFR 63.11224), or install, calibrate, operate, and maintain an oxygen analyzer system, as defined in 40 CFR 63.11237, according to the manufacturer's recommendations and paragraphs (a)(7) and (d) of 40 CFR 63.11224 (40 CFR 63.11224), as applicable, by the compliance date specified in 40 CFR 63.11196. Where a certified CO CEMS is used, the CO level shall be monitored at the outlet of the boiler, after any add-on controls or flue gas recirculation system and before release to the atmosphere. Boilers that use a CO CEMS are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in 40 CFR 63.11211(a) of 40 CFR 63 Subpart JJJJJJ. [Referencing Item 6. of Table 1. of 40 CFR 63 Subpart JJJJJJ and 40 CFR 63.11224].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the results of the weekly opacity observations and any U.S. EPA Reference Method 9 test [401 KAR 52:020, Section 10].

b. The permittee shall keep records of the manufacturer’s recommended procedures for startup and shutdown, any instance in which the recommended procedures were not followed, and any corrective actions taken [401 KAR 52:020, Section 10].

c. The permittee shall maintain records of the control equipment maintenance [401 KAR 52:020, Section 10].

d. Records of fuel usage, HCl emissions calculated, the sulfur content, and heat content of each delivered shipment shall be maintained by the permittee [401 KAR 52:020, Section 10].

e. Records, including those documenting the results of each compliance test, shall be kept 401 KAR 52:020, Section 10.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. The permittee shall maintain the records specified in 40 CFR 63.11225(c) [40 CFR 63.11225].

1. The records shall be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1)

2. As specified in 40 CFR 63.10(b)(1), the permittee shall keep each record for five (5) years following the date of each recorded action.

3. The permittee shall keep each record onsite for at least two (2) years after the date of each recorded action according to 40 CFR 63.10(b)(1).

4. The permittee must keep the record according to requirements of 40 CFR 63.11225(c) and (d).

g. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

6. Specific Reporting Requirements:

a. The permittee shall report the fuel usage, sulfur content, and heat content [401 KAR 52:020, Section 10].

b. The permittee shall report the number of excursions (excluding startup, shutdown, and malfunction data) above the opacity standard, date and time of excursions, opacity value of the excursions, and percentage of the opacity data showing excursions above the opacity standard in each calendar quarter [401 KAR 52:020, Section 10].

c. The permittee shall report the number of excursions above the sulfur dioxide standard, date of excursions, value of the excursions, and percentage of the sulfur dioxide data showing excursions from emission limitation in each calendar quarter [401 KAR 52:020, Section 10].

d. The permittee shall submit, upon request, a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to 40 CFR 63, Subpart JJJJJJ, Table 2 and that the assessment is an accurate depiction of the facility at the time of the assessment or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended [40 CFR 63.11214(c)].

e. The permittee shall report each instance in which the permittee did not meet each applicable emission limit and operating limit from Tables 1 and 3 of 40 CFR 63 Subpart JJJJJJ, according to the requirements in 40 CFR 63.11225 [40 CFR 63.11222(b)].

f. The permittee shall submit initial notifications, notifications of intent to conduct a performance test, and notifications of compliance status as required in 40 CFR 63.11225(a), and annual compliance certification reports as required in 40 CFR 63.11225(b) [40 CFR 63.11225(a) and 40 CFR 63.11225(b)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

g. Within 60 days after the date of completing each performance test (as defined in 40 CFR 63.2) required by 40 CFR 63 Subpart JJJJJJ, the permittee shall submit the results of the performance tests, including any associated fuel analyses, required by 40 CFR 63 Subpart JJJJJJ following the procedure specified in 40 CFR 63.11225(e)(1)(i) or (ii). [40 CFR 63.11225(e)(1)]

1. For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*https://www3.epa.gov/ttn/chief/ert/ert_info.html*) at the time of the test, the permittee shall submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data shall be submitted in a file format generated through the use of the EPA's ERT or an alternative electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If the permittee claims that some of the performance test information being submitted is confidential business information (CBI), the permittee shall submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted shall be submitted to the EPA via the EPA's CDX as described earlier. [40 CFR 63.11225(e)(1)(i)]

2. For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, the permittee shall submit the results of the performance test to the Administrator at the appropriate address listed in 40 CFR 63.13. [40 CFR 63.11225(e)(1)(ii)]

h. See **Section D - Source Emission Limitations and Testing Requirements** and **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

7. Specific Control Equipment Operating Conditions:

a. The cyclones shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and/or standard operating practices [401 KAR 50:055].

b. Records regarding the maintenance of the control equipment shall be maintained [401 KAR 52:020, Section 10].

c. See **Section E - Source Control Equipment Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 49-50: Paint Spray Booths

Description:
(Frank D. Peterson Bldg.)
Operating rate: 2.0 gal/hr, each for EU 49-50, Maintenance Shop Paint Spray Booths (2)
Control Device: Fabric filter
Construction Commenced: 1975

APPLICABLE REGULATIONS:
401 KAR 59:010, New process operations

1. **Operating Limitations:**
   The permittee shall limit the hours of operation of the paint booths to 300 hours per year (12 month rolling total) per booth.

2. **Emission Limitations:**
   a. Particulate emissions shall not exceed 2.34 lb/hr based on a three-hour-average [401 KAR 59:010, Section 3(2)].

   b. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 59:010, Section 3(1)].

      Compliance Demonstration Method
      Maintenance of the unit consistent with manufacturer's recommendations and procedures shall suffice to demonstrate compliance.

   c. See **Section D - Source Emission Limitations and Testing Requirements**.

3. **Testing Requirements:**
   Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1 and 401 KAR 59:005, Section 2(2)]

4. **Specific Monitoring Requirements:**
   The amount of each coating used and hours of operations shall be monitored on a monthly basis per booth [401 KAR 52:020, Section 10].

5. **Specific Recordkeeping Requirements:**
   a. Records of each coating used and hours of operation shall be kept on a monthly basis per booth [401 KAR 52:020, Section 10].

   b. Records of all routine and non-routine maintenance [401 KAR 52:020, Section 10].

6. **Specific Reporting Requirements:**
   See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

a. While the paint spray booths are in operation, the associated fabric filter shall be continuously operated [401 KAR 50:055]

b. Records regarding the maintenance of the control equipment shall be maintained [401 KAR 52:020, Section 10].

c. See **Section E - Source Control Equipment Requirements**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 53, 54, 55, 56, 59, 63, 64, 65 and 66: Sixty-Three Diesel-Fired Emergency Generators

Description:

KYEIS Designation	EU #	Locations	Maximum Engine Rating	Construction
53	53	Central Utility Plant	2885 HP	2004
54	54	Medical Central Heating and Cooling, Ben Roach Facility, Combs Bldg, Wright Medical Plaza, KY Clinic, UK Hospital-Chandler and Sander Brown Bldg	Seven Units ranging between 587-2385 HP	1973-2002
55	55	Central Heating Plant, Chemistry Physics, Medical Center Heating and Cooling, ASTECC, Plant Sciences, W.T. Young Library, Patterson Office Tower, Robotics Bldg., and Anderson Bldg.	Nine Units ranging between 535-1502 HP	1963-2003
56	56	Whitney Cancer Facility, Sanders-Brown, College of Nursing, Dental Science, Willard Medical, Lee Todd Bldg., and Research Bldg. #1	Seven Units ranging between 39-449 HP	Pre-2004
59	59	Building #s: 12, 14, 19, 22, 23, 34, 38, 39, 42, 54, 55, 58, 64, 91, 99, 101, 107, 197, 215, 219, 220, 222, 236, 241, 274, 275, 276, 277, 283, 17, 353, 494, 495, 504 & 505	Thirty-Five Units between 12-472 HP	Pre-2004
63-66	63 64 65 66	Roselle Hall (63) Baldwin Hall (64) Joe Craft Center (65) Parking Structure #7 (66)	390 HP 390 HP 277 HP 166 HP	2005

APPLICABLE REGULATIONS:

N/A

NON-APPLICABLE REGULATION:

401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

PRECLUDED REGULATIONS:
401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

401 KAR 51:017, Prevention of significant deterioration of air quality.

1. **Operating Limitations:**
   a. For EU 53, to preclude 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, the unit shall not operate more than 200 hours per year (12 month rolling total) and shall not burn more than 27,000 gallons of diesel fuel per year (12 month rolling total.)

   b. EU 63, 64, 65, and 66, to preclude the applicability of KAR 51:017, each emission unit shall not operate more than 500 hours per year (12 month rolling total) and shall be further restricted such that the total hours operating limit listed in **Section D - Source Emission Limitations and Testing Requirements** for these units is not exceeded. Additionally, the fuel sulfur weight percent shall not exceed 0.3 percent for fuel oil, and the usage rate of fuel oil (12 month rolling total) in all affected facilities shall be restricted so the emission limitations as set forth in **Section D - Source Emission Limitations and Testing Requirements** of this permit are not exceeded.

   Compliance Demonstration Method for a & b:
   See **4. Specific Monitoring Requirements a. and b.** and **5. Specific Recordkeeping Requirements a. and b.**

   c. To preclude 40 CFR 63, Subpart ZZZZ, the stationary RICE shall meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f) [40 CFR 63.6585(f)], and shall not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii) [40 CFR 63.6585(f)(3)].

   Compliance Demonstration Method:
   See **4. Specific Monitoring Requirements a.** and **5. Specific Recordkeeping Requirements a.**

2. **Emission Limitations:**
   See **Section D - Source Emission Limitations and Testing Requirements.**

3. **Testing Requirements:**
   Testing shall be conducted at such time as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. **Specific Monitoring Requirements:**
   a. The permittee shall monitor the hours of operation for each engine on a monthly basis [401 KAR 52:020, Section 10].

   b. The permittee shall monitor the amount of diesel fuel combusted (in gallons) of EU 53 and EUs 63-66 on a monthly basis. [401 KAR 52:020, Section 10]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of the hours of operation for each engine on a monthly basis [401 KAR 52:020, Section 10]

b. The permittee shall compile and maintain records of the total amount of diesel fuel consumed by each engine on a monthly and on a consecutive twelve (12) month rolling total basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 60–62, 67, 68, 69, 70, 71, 75, 76, 77, 79, 81-1, 81-2, 85 and 86: Nineteen Diesel-Fired Emergency Generators

Description:

KYEIS Designation	EU #	Location	Maximum Engine Rating	Construction
60-69	60-62	Medical Center heating and cooling plant (3 units) (60-62)	3,286 HP each	2007
	67	Central Utility Plant (67)	3,286 HP	2009
	69	New Patient Care Parking Structure #8 (69)	755 HP	2008
68	68	Central Utility Plant (68)	3,634 HP	2017
70	70-1	Gatton Business & Economics (70-1)	762 HP	2015
	70-2	Commonwealth Stadium (70-2)	755 HP	2015
71	71-1	Football Training Center (71-1)	320 HP	2015
	71-2	Baseball Stadium (71-2)	463 HP	2017
75	75	Davis Marksbury Bldg.	229 HP	2010
76	76	Parking Structure # 2	611 HP	2011
77	77	Wildcat Coal Lodge	157 HP	2011
79	79	Softball Complex	64 HP	2013
81-01	81-1	Jacobs Science Bldg.	1200 HP	9/1/2016
81-02	81-2	Student Center	3640 HP	11/1/2016
85	85-1	Samaritan Hospital (85-1)	1125 HP	2009
	85-2	Samaritan Hospital (85-2)	1125 HP	2009
86	86	Rosenberg Law Building	464 HP	2019

APPLICABLE REGULATIONS:

401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

401 KAR 60:005, Section 2(2)(dddd) 40 C.F.R. 60.4200 to 60.4219, Tables 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Note: D.C. Circuit Court [Delaware v. EPA, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 60, Subpart IIII that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 60.4211(f)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

PRECLUDED REGULATION:

401 KAR 51:017, Prevention of significant deterioration of air quality.

1. **Operating Limitations:**
   a. For EU 60-62 and 67, to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), emission units combined shall not operate more than 500 hours per year (12 month rolling total) and shall be further restricted such

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

that the total hours operating limit listed in **Section D - Source Emission Limitations and Testing Requirements** for these units is not exceeded. Additionally, the fuel sulfur weight percent shall not exceed 0.3 percent for fuel oil, and the usage rate of fuel oil (12 month rolling total) in all affected facilities shall be restricted so the emission limitations as set forth in **Section D - Source Emission Limitations and Testing Requirements** of this permit are not exceeded.

Compliance Demonstration Method:
See **4. Specific Monitoring Requirements c. and d.** and **5. Specific Recordkeeping Requirements c. and d.**

b. In order for the engines to be considered emergency stationary ICE (Internal Combustion Engine) under 40 CFR 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. If the permittee does not operate the engines according to the requirements below, the engines will not be considered emergency engines and shall meet all requirements for non-emergency engines [40 CFR 60.4211(f)].

1. There is no time limit on the use of emergency stationary ICE in emergency situations [40 CFR 60.4211(f)(1)].

2. Emergency stationary ICE may be operated for any combination of the purposes specified below for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2) [40 CFR 60.4211(f)(2)].

   i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4211(f)(2)(i)].

3. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided below. Except as provided below, the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. The 50 hours per year for non-emergency situations can be used to supply power as part of a

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

financial arrangement with another entity if all of the following conditions are met [40 CFR 60.4211(f)(3)]:

i. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

ii. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

iii. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

iv. The power is provided only to the facility itself or to support the local transmission and distribution system.

v. The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine permittee.

c. The permittee shall install non-resettable hour meters prior to startup of each engine [40 CFR 60.4209(a)].

d. If the engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter shall be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached [40 CFR 60.4209(b)].

e. The permittee shall operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions, change only those emission-related settings that are permitted by the manufacturer; and meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply [40 CFR 60.4211(a)].

f. The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted [40 CFR 60.4207(b)].

g. The permittee shall operate and maintain the stationary CI ICE such that the emission standards required in 40 CFR 60.4205 are achieved over the entire life of the engine [40 CFR 60.4206].

h. If the engine and control device are not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or emission-related

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

settings are changed in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance according to 40 CFR 60.4211(g)(3) [40 CFR 60.4211(g)].

2. Emission Limitations:

a. The emergency engines shall comply with the emission standards for new nonroad CI engines in 40 CFR 60.4202 for all pollutants, for the same model year and maximum engine power [40 CFR 60.4205(b) referencing 40 CFR 60.4202(a)(2), 40 CFR 89.112 and 40 CFR 89.113].

Compliance Demonstration Method:
The permittee shall comply by purchasing engines certified to the emission standards in 40 CFR 60.4204(b), for the same model year and maximum engine power. The engines shall be installed and configured according to the manufacturer's emission-related specifications [40 CFR 60.4211(c)].

b. For EU 79, the permittee shall certify the engine to the emission standards in the table below [40 CFR 60.4205(c) referencing Table 4 to Subpart IIII of Part 60].

NMHC + NOX g/kw-hr (g/hp-hr)	PM g/kw-hr (g/hp-hr)
4.7 (3.5)	0.40 (0.30)

Compliance Demonstration Method:
The permittee shall comply with the emission standards specified in 40 CFR 60.4205(b) by purchasing an engine certified to the emission standards in 40 CFR 60.4205(b) for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications. [40 CFR 60.4211(c)]

c. If the permittee does not install, configure, operate, and maintain the engines and control device according to the manufacturer's emission-related written instructions, or changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance by keeping a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, see **3.Testing Requirements b.**

d. See **Section D - Source Emission Limitations and Testing Requirements**

3. Testing Requirements:

a. Testing shall be conducted at such times as may be required by the Cabinet [401 KAR 50:045, Section 4].

b. For engines greater than 500 HP, if a non-certified engine is purchased or a certified engine and control device not operated and maintained according to the manufacturer's written emission-related instructions, the permittee shall conduct an initial performance test to

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards [40 CFR 60.4211(g)].

4. Specific Monitoring Requirements:

a. The permittee shall install non-resettable hour meters prior to startup of each engine [40 CFR 60.4209(a)].

b. If the engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the diesel particulate filter shall be installed with a backpressure monitor that notifies the permittee when the high backpressure limit of the engine is approached [40 CFR 60.4209(b)].

c. The permittee shall monitor the hours of operation of each engine on a monthly basis. [401 KAR 52:020, Section 10]

d. The permittee shall monitor the amount of diesel fuel combusted (in gallons) of EUs 60-62 and EU 67 on a monthly basis. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

a. If the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the engine and the reason the engine was in operation during that time [40 CFR 60.4214(b)].

b. For engines equipped with a diesel particulate filter, the permittee shall keep records of any corrective action taken after the backpressure monitor has notified the permittee that the high backpressure limit of the engine is approached [40 CFR 60.4214(c)].

c. The permittee shall maintain records of the hours of operation of each engine on a monthly basis. [401 KAR 52:020, Section 10]

d. The permittee shall maintain records of the amount of diesel fuel combusted (in gallons) of EUs 60-62 and EU 67 on a monthly and 12 month rolling total basis. [401 KAR 52:020, Section 10]

e. The permittee shall maintain records of the manufacturer’s certified emissions certificate, manufacturer’s written operating instructions, and any procedures developed by the permittee that are approved by the engine manufacturer, over the entire life of the engine [401 KAR 52:020, Section 10].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

6. Specific Reporting Requirements:

a. If the engines operate or are contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(3) the permittee shall submit an annual report according to the following requirements [40 CFR 60.4214(d)].

1. The report shall contain the following information:

i. Company name and address where the engine is located.

ii. Date of the report and beginning and ending dates of the reporting period.

iii. Engine site rating and model year.

iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

v. Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

2. The first annual report shall cover the current calendar year and shall be submitted no later than March 31 of the following calendar year. Subsequent annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year.

3. The annual report shall be submitted electronically using the 40 CFR 60 Subpart IIII specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this 40 CFR 60, Subpart IIII is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

b. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 78: Nine Natural Gas-Fired Emergency Generators

Description:

KYEIS designation	EU #	Location	Maximum Engine Rating	Constructed Before
78	78-1	M I King	60 HP	1961
	78-3	Terrell (not operative)	23 HP	1969
	78-4	Memorial Hall	12 HP	1969
	78-5	Multi-Disciplinary Research #3	68 HP	1971
	78-6	Garrigus Bldg.	150 HP	1973
	78-7	T. H. Morgan Biological	68 HP	1973
	78-8	Oswald	83 HP	1975
	78-9	IRIS	23 HP	2004
	78-11	Building 200	38 HP	1996

APPLICABLE REGULATIONS:
N/A

NON-APPLICABLE REGULATION:
401 KAR 60:005, Section 2(2)(eeee), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

PRECLUDED REGULATION:
401 KAR 63:002, Section 2(4)(eeee), 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

1. **Operating Limitations:**
   To preclude 40 CFR 63, Subpart ZZZZ, the stationary RICE shall meet the definition of an emergency stationary RICE in 40 CFR 63.6675, which includes operating according to the provisions specified in 40 CFR 63.6640(f) [40 CFR 63.6585(f)] and shall not operate for the purpose specified in 40 CFR 63.6640(f)(4)(ii). [40 CFR 63.6585(f)(3)]

   Compliance Demonstration Method:
   See **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**.

2. **Emission Limitations:**
   See **Section D - Source Emission Limitations and Testing Requirements**.

3. **Testing Requirements:**
   Testing shall be conducted at such time as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. **Specific Monitoring Requirements:**
   The permittee shall monitor the hours of operation of each engine on a monthly basis. [401 KAR 52:020, Section 10]

5. **Specific Recordkeeping Requirements:**
   The permittee shall compile and maintain records of the hours of operation for each engine on a monthly basis. [401 KAR 52:020, Section 10]

6. **Specific Reporting Requirements:**
   See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 72 and 80: Four Natural Gas-Fired Emergency Generators

Description:

KYEIS designation	EU #	Location	Maximum Engine Rating	Construction
72	72	The 90	701 HP	2015
80	80-1	Building 400	82 HP	2014
	80-2	Agronomy Headhouse	85 HP	2014
	80-3	Arts and Visual Bldg	259 HP	2015

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(eeee), 40 C.F.R. 60.4230 to 60.4248, Tables 1 to 4 (Subpart JJJJ), Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Note: D.C. Circuit Court [*Delaware v. EPA*, 785 F. 3d 1 (D.C. Cir. 2015)] has vacated the provisions in 40 CFR 60, Subpart JJJJ that contain the 100-hour exemption for operation of emergency engines for purposes of emergency demand response under 40 CFR 60.4243(d)(2)(ii)-(iii). The D.C. Circuit Court issued the mandate for the vacatur on May 4, 2016.

401 KAR 63:002, Section 2(4)(eeee) 40 C.F.R. 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (Subpart ZZZZ), National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

1. **Operating Limitations:**
   a. The permittee shall operate and maintain the stationary SI ICE such that the emission standards required in 40 CFR 60.4233 are achieved over the entire life of the engine [40 CFR 60.4234].

   b. If the certified stationary SI internal combustion engine and control device are not operated and maintained according to the manufacture's emission-related written instructions, the engine will be considered a non-certified engine, and compliance shall be demonstrated according to (a)(2)(i) through (iii) of 40 CFR 60.4243, as appropriate [40 CFR 60.4243(a)(2)].

   c. The permittee shall operate the emergency stationary ICE according to the requirements in 40 CFR 60.4243(d)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart JJJJ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4243(d)(1) through (3), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 60.4243(d)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60, Subpart JJJJ and shall meet all requirements for non-emergency engines [40 CFR 60.4243(d)].

      1. There is no time limit on the use of emergency stationary ICE in emergency situations.

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emergency stationary ICE may be operated for any combination of the purposes specified in 40 CFR 60.4243(d)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed in 40 CFR 60.4243(d)(3) counts as part of the 100 hours per calendar year allowed in 40 CFR 60.4243(d)(2)

    i. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year.

3. Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR 60.4243(d)(2). Except as provided in 40 CFR 60.4243(d)(3)(i), the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

    i. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

        A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator;

        B. The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

        C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

        D. The power is provided only to the facility itself or to support the local transmission and distribution system.

        E. The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine permittee.

d. The permittee may operate the engines using propane for a maximum of 100 hours per year as an alternative fuel solely during emergency operations, but shall keep records of such use [40 CFR 60.4243(e)].

e. Engines equipped with three-way catalysts/non-selective catalytic reduction are expected to use air-to-fuel ratio (AFR) controllers. The AFR controller shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [40 CFR 60.4243(g)]

2. Emission Limitations:

a. The permittee shall comply with the emission standards in the table below [40 CFR 60.4233(d) and (e) referencing Table 1 to Subpart JJJJ of Part 60].

EU #	NO_x+HC g/HP-hr	NO_x g/HP-hr (ppm @ 15% O_2)	CO g/HP-hr (ppm @ 15% O_2)	VOC g/HP-hr (ppm @ 15% O_2)
72	N/A	2.0 (160)	387	N/A
80 (80-1)	10	N/A	4.0 (540)	1.0 (86)
80 (80-2)	10	N/A	4.0 (540)	1.0 (86)
80 (80-3)	N/A	2.0 (160)	387	N/A

Compliance Demonstration Method:

I. The permittee shall comply with the emission standards specified in 40 CFR 60.4233(d) and (e) by purchasing an engine certified according to the procedures specified in 40 CFR 60, Subpart JJJJ and demonstrating compliance according to one of the methods specified in paragraph (a) of 40 CFR 60.4243 [40 CFR 60.4243(b)(1)], or

II. The permittee shall comply with the emission standards specified in 40 CFR 60.4233(d) and (e) by purchasing a non-certified engine and demonstrating compliance according to the requirements specified in 40 CFR 60.4244, as applicable, and according to paragraphs (b)(2)(i) and (ii) of 40 CFR 60.4243 [40 CFR 60.4243(b)(2)].

b. See **Section D - Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

a. Testing shall be conducted at such times as may be required by the Cabinet [401 KAR 50:045, Section 4].

b. If propane is used for more than 100 hours per year in an engine that is not certified to the emission standards when using propane, the permittee shall conduct a performance test to demonstrate compliance with the emission standards of 40 CFR 60.4233 [40 CFR 60.4243(e)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. If a non-certified engine is purchased or a certified engine and control device not operated and maintained according to the manufacturer's written emission-related instructions, the permittee shall perform initial performance testing as indicated in 40 CFR 60.4233. Subsequent performance testing is not required unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a). [40 CFR 60.4243(f)]

d. If the permittee is required to conduct performance testing the permittee shall following the following procedures listed section 40 CFR 60.4244 (a) thru (f) [40 CFR 60.4244 (a) thru (f)].

e. If the permittee chooses to measure VOC emissions using either Method 18 of 40 CFR part 60, appendix A, or Method 320 of 40 CFR part 63, appendix A, then it has the option of correcting the measured VOC emissions to account for the potential differences in measured values between these methods and Method 25A. The results from Method 18 and Method 320 can be corrected for response factor differences using Equations 4 and 5 of section 40 CFR 60.4244 (g). The corrected VOC concentration can then be placed on a propane basis using Equation 6 of 40 CFR 60.4244 (g) [40 CFR 60.4244(g)].

4. Specific Monitoring Requirements:

a. The permittee shall install a non-resettable hour meter on each unit prior to the start-up of the engine [40 CFR 60.4237].

b. The permittee shall monitor the hours of operation of each engine on a monthly basis. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

a. If the certified stationary SI internal combustion engine and control device are operated and maintained according to the manufacture's emission-related written instructions, the permittee shall keep records of conducted maintenance to demonstrate compliance. The permittee shall also meet the requirements as specified in 40 CFR 1068, Subparts A through D, as they apply. If the permittee adjusts engine settings according to and consistent with the manufacturer's instructions, your stationary SI internal combustion engine will not be considered out of compliance [40 CFR 60.4243(a)(1)].

b. The permittee shall compile and maintain records of hours of operation for each engine on a monthly basis. [401 KAR 52:020, Section 10]

c. The permittee shall maintain records of the manufacturer's certified emissions certificate, manufacturer's written operating instructions, and any procedures developed by the permittee that are approved by the engine manufacturer, over the entire life of the engine [401 KAR 52:020, Section 10].

d. The permittee shall keep records of the information listed below [40 CFR 60.4245(a)]:

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. All notifications submitted to comply with 40 CFR 60, Subpart JJJJ and all documentation supporting any notification.

2. Maintenance conducted on the engine.

3. If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

4. If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards.

5. For stationary SI ICE that are subject to performance testing, the permittee shall submit a copy of each performance test as conducted in 40 CFR 60.4244 within 60 days after the test has been completed [40 CFR 60.4245(d)].

e. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

6. Specific Reporting Requirements:

a. If the permittee operates for the purposes specified in 40 CFR 60.4243(d)(3)(i), the permittee shall submit an annual report according to the requirements in 40 CFR 60.4245(e)(1) through (3) [40 CFR 60.4245(e)].

1. The report shall contain the following information:

i. Company name and address where the engine is located.

ii. Date of the report and beginning and ending dates of the reporting period.

iii. Engine site rating and model year.

iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

v. Hours spent for operation for the purposes specified in 40 CFR 60.4243(d)(3)(i), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4243(d)(3)(i). The report shall also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

2. The first annual report shall cover the calendar year 2015 and shall be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year shall be submitted no later than March 31 of the following calendar year.

3. The annual report shall be submitted electronically using the Subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However,

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

if the reporting form specific to 40 CFR 60 Subpart JJJJ is not available in CEDRI at the time that the report is due, the written report shall be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

b. See **Section F - Monitoring, Recordkeeping, and Reporting Requirements**.

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

	Description	Generally Applicable Regulation
1.	Fuel Oil Storage Tanks	N/A
2.	Underground Gasoline Storage Tanks	N/A
3.	Laboratory Fume Hoods	N/A
4.	TSD Consolidation	401 KAR 59:010
5.	Transportation Research Center	401 KAR 59:010
6.	Arts and Visual Bldg. Paint Spray Booth (Usage less than 50 gal/yr)	401 KAR 59:010
7.	TK-76 Fuel oil storage tank (300 gal)	N/A
8.	Fifty-Seven hot water heaters 8.4 MMBtu/hr combined	N/A
9.	Four gas-fired space heaters 0.54 MMbtu/hr combined	N/A
10.	One gas-fired furnace 0.08 MMBtu/hr	N/A
11.	Thirteen natural gas heat exchangers under 1 MMBtu/hr each	N/A
12.	#2 Diesel Fuel Cylinder tank, underground	N/A
13.	Grain Handling Operations (2.1 tons/hr)	401 KAR 59:010
14.	Six 500-Gallon Fermenters	401 KAR 63:010
15.	Aging Facility (952 bbl/yr)	401 KAR 63:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Particulate matter, sulfur dioxide, nitrogen oxide, and hydrogen chloride emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

3. To preclude the applicability of 401 KAR 51:017, nitrogen oxide emissions from **emission units 51 and 53** shall not exceed 30 tons in any consecutive twelve months. NOx emissions from these units shall be calculated using the following equation:

   NOx emissions (tons) = [AP-42 emission factor or vendor certified emission factor (lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned) x fuel burned per month (1000 gallons or 10^6feet^3)/ 2000 lbs/ton.

   To demonstrate compliance with this emission limitation, the total twelve-month rolling NOx emissions from **emission units 51 and 53** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

4. To preclude the applicability of 401 KAR 51:017, sulfur dioxide emissions from **emission units 51 and 53** shall not exceed 26 tons in any consecutive twelve months. SO_2 emissions from these units shall be calculated using the following equation:

   SO_2 emissions (tons) = [AP-42 emission factor (lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned) x fuel burned per month (1000 gallons or 10^6feet^3) / 2000 lbs/ton.

   To demonstrate compliance with this emission limitation, the total twelve-month rolling SO_2 emissions from **emission units 51 and 53** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

5. To preclude the applicability of 401 KAR 51:017, carbon monoxide emissions from **emission units 51 and 53** shall not exceed 32 tons in any consecutive twelve months, and shall be calculated using the following equation:

   CO emissions (tons) = [AP-42 emission factor or vendor certified emission factor (lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned) x fuel burned per month (1000 gallons or 10^6feet^3) / 2000 lbs/ton.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

To demonstrate compliance with this emission limitation, the total twelve-month rolling CO emissions from **emission units 51 and 53** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

6. To preclude the applicability of 401 KAR 51:017, combined nitrogen oxide emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67,** shall not exceed 36 tons in any consecutive twelve months. NOx emissions from these units shall be calculated using the following equation:

   NOx emissions (tons) = [(AP-42 emission factor or vendor certified emission factor)(lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned)] x fuel burned per month(1000 gallons or 10^6feet^3) / 2000 lbs/ton[V-13-024].

   To demonstrate compliance with this nitrogen oxide emission limitation, the total twelve-month rolling NOx emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

7. To preclude the applicability of 401 KAR 51:017, combined sulfur dioxide emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67** shall not exceed 36 tons in any consecutive twelve months. SO_2 emissions from these units shall be calculated using the following equation:

   SO_2 emissions (tons) = [AP-42 emission factor (lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned] x fuel burned per month (1000 gallons or 10^6feet^3) / 2000 lbs/ton.

   To demonstrate compliance with this emission limitation, the total twelve-month rolling SO_2 emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

8. To preclude the applicability of 401 KAR 51:017, carbon monoxide emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67** shall not exceed 90 tons in any consecutive twelve months. CO emissions from emission these units shall be calculated using the following equation:

   CO emissions (tons) = [AP-42 emission factor or vendor certified emission factor (lbs/1000 gallons fuel burned or lbs/10^6feet^3 natural gas burned] x fuel burned per month (1000 gallons or 10^6feet^3) / 2000 lbs/ton.

   To demonstrate compliance with this emission limitation, the total twelve-month rolling CO emissions from **emission units 15, 16, 60, 61, 62, 63, 64, 65, 66, and 67** shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

9. To preclude the applicability of 401 KAR 51:017, total combined annual operating hours (12 month rolling total) for **emission units 60, 61, 62, 63, 64, 65, 66, and 67** shall not exceed 1800 hours. To demonstrate compliance with this operating limitation, the permittee shall calculate the total twelve-month rolling hours of operation on a monthly basis [V-13-024].

10. To preclude the applicability of 40 CFR 63, Subpart DDDDD, **source-wide** (including insignificant activities) emissions of Hydrogen Chloride (HCl) (Single Hazardous Air Pollutant (HAP)) shall not exceed 9.0 tons in any consecutive twelve months period. HCl emissions shall be calculated using the following equation:

    HCl, Single HAP Emissions (tons) = (Total tons coal burned) x (EF lb/ton)* / (2000 lb/ton)

    *For compliance with the HCl emission limit, an emission factor (EF) listed in Kentucky Emission Inventory System (KyEIS) or the emission factor (EF) resulting from the most recent stack test shall be used and the total twelve-month rolling HCl emissions shall be calculated monthly and reported semi-annually (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

11. To preclude the applicability of 40 CFR 63, Subpart DDDDD, the permittee shall notify the Division at least thirty (30) days prior to any change in coal supplier, fuel type, or fuel mixture, used in **EU 07, 08, 13-1, and 13-2** from those fuels used in the stack tests to establish the HCl emission factor used above for determining compliance. This notification shall include a fuel analysis of the new fuel for Hydrogen Chloride. The Division may request additional stack testing be completed in addition to this fuel analysis [V-13-024].

12. To preclude the applicability of 40 CFR 63 Subpart DDDDD, **source-wide** (including insignificant activities) emissions of Total Hazardous Air Pollutants (HAPs) shall not exceed 22.5 tons in any consecutive twelve months period.

    To demonstrate compliance with this emission limitation, the total twelve-month rolling Total HAPs Emissions shall be calculated monthly and reported semi-annually to the Regional Office (see **Section F - Monitoring, Recordkeeping, and Reporting Requirements**) [V-13-024].

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
   a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
   b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
   c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
Frankfort Regional Office
300 Sower Boulevard 1st Floor
Frankfort, KY 40601-1758

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirement

c. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
   (4) New requirements become applicable to a source subject to the Acid Rain Program.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission unit 87, in accordance with the terms and conditions of this permit, V-18-052 R1.

SECTION G - GENERAL PROVISIONS (CONTINUED)

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:

(1) The date when construction commenced.

(2) The date of start-up of the affected facilities listed in this permit.

(3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

N/A

SECTION I - COMPLIANCE SCHEDULE

N/A