## **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:** East Kentucky Power Cooperative, Inc. 4775 Lexington Road, P.O. Box 707 **Mailing Address:** 

Winchester, KY 40392-0707

**Source Name:** J.K. Smith Generating Station

**Mailing Address:** 12145 Irvine Road

Winchester, KY 40391

**Source Location: KY Route 89** 

**Permit:** V-18-028

**Agency Interest:** 808

**Activity:** APE20180001 **Review Type:** Title V, Operating

**Source ID:** 21-049-00027

**Regional Office:** Frankfort Regional Office

300 Sower Boulevard, 1st Floor

Frankfort, KY 40601

(502) 564-3358

Clark **County:** 

**Application** 

February 13, 2018 **Complete Date: Issuance Date:** May 17, 2020 **Expiration Date:** 

May 17, 2025

For

Melissa Duff, Director **Division for Air Quality** 

Rick S. Shewekah

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Permit Number	Permit Type	Activity #	Complete Date	Issuance Date	Summary of Action
V-18-028	Renewal	APE20180001	02/13/18	5/17/2020	Add EU 15 & Remove EU 12

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#### **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.

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# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

#### Emissions Units 01-03 (SCT01-SCT03) - ABB GT 11N2 Combustion Turbines

Emission Unit	Description	Construction Commenced	Maximum Rating	Fuel	Control Equipment
01 (SCT01)	Combustion Turbine, ABB GT 11N2, peak load	August 1993	1492 MMBtu/hr 115 MW**	Natural Gas, Fuel Oil*	Water Injection
02 (SCT02)	Combustion Turbine, ABB GT 11N2, peak load	August 1993	1492 MMBtu/hr 115 MW**	Natural Gas, Fuel Oil*	Water Injection
03 (SCT03)	Combustion Turbine, ABB GT 11N2, peak load	August 1993	1492 MMBtu/hr 115 MW**	Natural Gas, Fuel Oil*	Water Injection

<sup>\*</sup>Low (≤ 0.05 percent) Sulfur \*\* Maximum rating based on ISO conditions

## **Applicable Regulations:**

- 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
- 401 KAR 51:160, NO<sub>X</sub> Requirements for Large Utility and Industrial Boilers, incorporating 40 CFR 96 (See Section K)
- 401 KAR 51:210, CAIR NO<sub>X</sub> Annual Trading Program (See Section K)
- 401 KAR 51:220, CAIR NO<sub>X</sub> Ozone Season Trading Program (See Section K)
- 401 KAR 51:230, CAIR SO<sub>2</sub> Trading Program (See Section K)
- 401 KAR 51:240, Cross-State Air Pollution Rule (CSAPR) NO<sub>x</sub> annual trading program (See Section L)
- 401 KAR 51:250, Cross-State Air Pollution Rule (CSAPR) NO<sub>X</sub> ozone season group 2 trading program (See Section L)
- 401 KAR 51:260, Cross-State Air Pollution Rule (CSAPR) SO<sub>2</sub> group 1 trading program (See Section L)
- 401 KAR 52:060, Acid Rain Permits, incorporating 40 CFR Parts 72 to 78 (See Section J)
- 401 KAR 60:005, Section 2(2)(pp) 40 C.F.R. 60.330 to 60.335 (Subpart GG), Standards of Performance for Stationary Gas Turbines
- 40 CFR Part 75, Continuous Emissions Monitoring (CEM)

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

## **State-Origin Applicable Regulation:**

401 KAR 63:021, Existing Sources Emitting Toxic Air Pollutants.

#### **Non-Applicable Regulation:**

401 KAR 63:002, Section 2(4)(dddd) 40 C.F.R. 63.6080 to 63.6175, Tables 1 to 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

### 1. **Operating Limitations:**

a. Operating hours shall not exceed 2,500 hours during any consecutive 12 months for each combustion turbine. The primary fuel is natural gas with No. 2 fuel oil as a secondary fuel. No. 2 fuel oil shall not be used more than 250 hours during any consecutive 12 months for each combustion turbine.

### **Compliance Method**

Compliance shall be demonstrated by calculating monthly the 12-month hours of operation of both fuel oil and natural gas and semi-annual reporting. The permittee shall maintain onsite a log of each 12-month rolling total. See **4. Specific Monitoring Requirements i**, and **5. Specific Recordkeeping Requirements d**.

b. Elapsed time during each startup or shutdown event for each unit shall not exceed 2 hours. Each unit shall not start up more than 200 times per year. Startup events shall be defined as going from 0 percent load up to or above 90 percent load. A shutdown event means going from operating load down to 0 percent load.

#### Compliance Method

Compliance shall be demonstrated by monitoring, recordkeeping and reporting of operational data. See **4. Specific Monitoring Requirements i**, **5. Specific Recordkeeping Requirements d**. and **6. Specific Reporting Requirements a**.

c. The permittee shall continue to comply with all conditions based on 401 KAR 63:022 unless it can demonstrate that a condition is no longer necessary to protect human health and the environment [401 KAR 63:021].

#### 2. Emission Limitations:

- a. Nitrogen oxide emissions shall not exceed, except during startup, shutdown, or malfunction events:
  - 1. 42 ppm by volume at 15 percent oxygen dry basis when combusting number 2 fuel oil [401 KAR 51:017, 40 CFR 60.332]; and
  - 2. 25 ppm by volume at 15 percent oxygen dry basis when combusting natural gas [401 KAR 51:017, 40 CFR 60.332].

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

## **Compliance Method**

Compliance shall be demonstrated by **3. Testing Requirements b.** and by using continuous emission monitoring or continuous monitoring conducted in accordance with **4. Specific Monitoring Requirements a, b, or c.** [40 CFR 60.334(a), (b), (c), (g), and (j)].

b. These units are exempt from the emission limits in **2. Emission Limitations a.** when ice fog is deemed a traffic hazard by the permittee [40 CFR 60.332(f)].

### **Compliance Method**

Compliance shall be demonstrated by the reporting specified in **6. Specific Reporting Requirements c**.

- c. Exemptions from the requirements of **2. Emission Limitations a.** shall be granted on a case-by-case basis, as determined by the Cabinet, in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions shall be allowed only while the mandatory water restrictions are in effect [40 CFR 60.332(i)].
- d. Sulfur dioxide emissions shall not exceed 500 pounds per hour, each. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection [401 KAR 51:017, 40 CFR 60.333].

### **Compliance Method**

Compliance shall be demonstrated by calculation using representative fuel analysis and hourly fuel consumption data from the continuous monitoring system. Formula: Pounds per hour sulfur dioxide when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x density in pounds per gallon (about 7.05 lb/gallon) x percent sulfur/100 x 2.00 lbs sulfur dioxide per lb sulfur (emission factor from vendor) or lbs per hour sulfur dioxide when combusting natural gas = million cubic feet (MMCF) natural gas per hour x 0.6 lb/MMCF (AP-42 3.1).

- e. Sulfur content shall not exceed:
  - 1. 2.0 grains/1000 SCF when combusting natural gas [401 KAR 51:017].
  - 2. 0.05% sulfur by weight when combusting fuel oil [401 KAR 51:017].

### **Compliance Method**

Compliance shall be demonstrated by fuel sampling, monitoring, recordkeeping, and reporting. See 4. Specific Monitoring Requirements e, 5. Specific Record Keeping Requirements c, and 6. Specific Reporting Requirements b.

f. Carbon monoxide emissions shall not exceed 75 pounds per hour, each, except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

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

## **Compliance Method**

Continuous compliance with this limit shall be demonstrated by a continuous emission monitor.

g. Particulate matter emissions shall not exceed 54 pounds per hour, each, except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

## Compliance Method

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour particulate emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.00167 lbs/gallon (emission factor from AP-42 3.1); or lbs per hour particulate emissions when combusting natural gas = MMCF natural gas per hour x 6.73 lbs/MMCF (AP-42 3.1).

h. Volatile organic compound emissions shall not exceed 26 pounds per hour, each, except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

## **Compliance Method**

Continuous compliance with this limit shall be demonstrated by compliance with the carbon monoxide limit.

i. Beryllium emissions shall not exceed 0.0038 pounds per hour, each, except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

#### Compliance Method

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour beryllium emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.000000043 lbs/gallon (AP-42); or lbs per hour beryllium emissions when combusting natural gas = MMCF natural gas per hour x 0.000012 lbs/MMCF (AP-42).

j. Sulfuric acid mist emissions shall not exceed 15 pounds per hour, each, except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

#### Compliance Method

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour sulfuric acid mist emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.423

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

lbs/gallon x percent fuel sulfur/100; or lbs per hour sulfuric acid mist emissions when combusting natural gas = MMCF natural gas per hour x 0.018 lbs/MMCF (AP-42).

k. Emissions from each unit shall not exceed the limits in the table below [401 KAR 63:021].

### Compliance Method

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x Emission Factor (lbs/gallon of fuel oil) or lbs per hour emissions when combusting natural gas = MMCF natural gas per hour x Emission Factor (lbs/MMCF of natural gas).

Pollutant	Emission Limit (lbs/hr, 8-hour rolling average)	Emission Factor (lbs/gallon of fuel oil)	Emission Factor (lbs/MMCF of natural gas)
Cadmium	0.0642	0.000000667	0.0011
Chromium	0.290	0.00000153	0.0014
Formaldehyde	2.48	0.0000389	0.724
Mercury	0.00229	0.000000167	0.00026
Lead	0.171	0.00000195	0.0005
Nickel	1.039	0.000000639	0.0021
Copper	1.71	0.0000389	0.00085
Manganese	0.159	0.0000000355	0.00038

#### 3. Testing Requirements:

- a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].
- b. For units not equipped with a NO<sub>x</sub> CEMS, the permittee shall conduct nitrogen oxides performance testing on each unit using the methods required by 40 CFR 60.335(a) at least once every 20 calendar quarters in conjunction with the correlation testing required by 40 CFR Part 75, Appendix E, Section 2.2 and 40 CFR 60.335(b).

### 4. Specific Monitoring Requirements:

a. Except as provided in **4. Specific Monitoring Requirements c.** (40 CFR 60.334(b)), for each unit using water or steam injection to control NO<sub>x</sub> emissions, the permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in each turbine [40 CFR 60.334(a)]. The steam or water to fuel ratio shall be monitored during the nitrogen oxides performance tests required in **3. Testing Requirements b**, to establish acceptable values and ranges. The permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO<sub>x</sub>

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

emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. The permittee may meet the requirements of 40 CFR 60.334(g) by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in section 2.3 of appendix E and section 1.3.6 of appendix B to 40 CFR Part 75 [40 CFR 60.334(g)].

- b. Except as provided in **4. Specific Monitoring Requirements c.** (40 CFR 60.334(b)), for each unit not using water or steam injection to control NO<sub>X</sub> emissions, the permittee shall use the NO<sub>X</sub> estimation method in 40 CFR Part 75, Appendix E to continuously monitor NO<sub>X</sub> emissions [40 CFR 60.334(c)].
- c. The permittee may, as an alternative to operating the continuous monitoring system described in **4. Specific Monitoring Requirements a.** (40 CFR 60.334(a)) and **4. Specific Monitoring Requirements b.** (40 CFR 60.334(c)), install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO<sub>X</sub> and O<sub>2</sub> monitors. As an alternative, a CO<sub>2</sub> monitor may be used to adjust the measured NO<sub>X</sub> concentrations to 15 percent O<sub>2</sub> by either converting the CO<sub>2</sub> hourly averages to equivalent O<sub>2</sub> concentrations using Equation F–14a or F–14b in appendix F to 40 CFR Part 75 and making the adjustments to 15 percent O<sub>2</sub>, or by using the CO<sub>2</sub> readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained and operated in accordance with 40 CFR 60.334(b) [40 CFR 60.334(b)].
- d. If a unit's operations exceed the level required to be a peaking unit, as defined in 40 CFR 72.2, the permittee shall install and certify a continuous NOx emission monitoring system, if one is currently not installed, no later than December 31 of the following calendar year [40 CFR75.12(d)(2)].
- e. The permittee shall monitor sulfur content of the fuel being fired in the turbine [40 CFR 60.334(h)(4)]. The frequency of determination of these values shall be as specified in the following approved custom fuel monitoring schedule:
  - 1. The permittee shall sample gaseous fuel for sulfur content every 6 months, unless the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR 60.331(u). The permittee shall use one of the following sources of information to demonstrate that the fuel used is natural gas [40 CFR 60.334(h)(3)]:
    - i. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less [40 CFR 60.334(h)(3)(i)]; or
    - ii. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified 40 CFR part 75 of appendix D in section 2.3.1.4 or 2.3.2.4 is required [40 CFR 60.334(h)(3)(ii)].

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

- 2. The permittee shall sample the fuel oil in accordance with 40 CFR Part 75, Appendix D, Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 [40 CFR 60.334(i)(1)].
- f. To meet the periodic monitoring requirement for carbon dioxide the permittee shall use the approved alternate procedure of 40 CFR 75, Appendix G in lieu of a continuous emission monitor [401 KAR 52:020, Section 10].
- g. The permittee shall perform and report Quality Assurance (QA) procedures for CO CEMS specified in Appendix F of 40 CFR 60, according to the schedule for Quality Assurance procedures specified in Appendix B of 40 CFR 75.
- h. The permittee shall install, calibrate, operate, test, and monitor all continuous monitoring systems and monitoring devices in accordance with 40 CFR 60.13 or 40 CFR 75.
- i. The permittee shall monitor on a daily basis [401 KAR 52:020, Section 10]:
  - 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine,
  - 2. Hours of operation of each combustion turbine,
  - 3. The power output, in MW, of each combustion turbine, and
  - 4. The date and time of the beginning and end of each startup and shutdown.

#### 5. Specific Record Keeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 40 CFR 60, Subpart A recorded in a permanent form suitable for inspection [40 CFR 60.7(f)].
- b. Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for 5 years [401 KAR 52:020, Section 10].
- c. The permittee shall maintain a log of all sulfur content measurements [401 KAR 52:020, Section 10].
- d. The permittee shall maintain a daily log of [401 KAR 52:020, Section 10]:
  - 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine for any consecutive 12 months,
  - 2. Hours of operation of each combustion turbine for any 12 consecutive months,

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

- 3. The power output, in MW, of each combustion turbine for any 12 consecutive months, and
- 4. The date and time of the beginning and end of each startup and shutdown.

## 6. Specific Reporting Requirements:

- a. The permittee shall submit reports every calendar quarter, postmarked by the 30th day following the end of the quarter, the following information [40 CFR 60.7(c)]:
  - 1. The magnitude of excess emissions, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions.
  - 2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
  - 3. The date and time identifying each period during which any continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - 4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- b. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions and monitor downtime are defined as follows [40 CFR 60.334(j)]:
  - 1. Nitrogen oxides.
    - i. For turbines using water or steam to fuel ratio monitoring:
      - A. An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 2. Emission Limitations a., as established during the performance test. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission [40 CFR 60.334(j)(1)(i)(A)].
      - B. A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid [40 CFR 60.334(j)(1)(i)(B)].
      - C. Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), and gas turbine load. The permittee does not have to report ambient conditions if the permittee opts to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if the permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) [40 CFR 60.334(j)(1)(i)(C)].

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

- ii. For turbines using NOx and diluent CEMS:
  - A. An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>X</sub> concentration exceeds the applicable emission limits in **2. Emission Limitations a**. A "4-hour rolling average NO<sub>X</sub> concentration" is the arithmetic average of the average NO<sub>X</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the 3 unit operating hour average NO<sub>X</sub> concentrations immediately preceding that unit operating hour [40 CFR 60.334(j)(1)(iii)(A)].
  - B. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>X</sub> concentration or diluent (or both) [40 CFR 60.334(j)(1)(iii)(B)].
  - C. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period. The permittee does not have to report ambient conditions if the permittee opts to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if the permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) [40 CFR 60.334(j)(1)(iii)(C)].
- iii. For turbines using the monitoring estimation method in 40 CFR Part 75, Appendix E without water or steam injection, excess emissions are defined as any 1-hour period during which the average emissions (arithmetic average), calculated in accordance with 40 CFR Part 75, Appendix E, Section 2.1.5, exceeds the applicable nitrogen oxides emission standard [501 KAR 52:020, Section 10].

#### 2. Sulfur dioxide.

- i. For oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent sulfur by weight and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit [40 CFR 60.334(j)(2)(i)].
- ii. If the option to sample each delivery of fuel oil has been selected, the permittee shall immediately switch to one of the other oil sampling options (*i.e.*, daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 percent sulfur by weight. The permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 6.a.(2)(a) above. When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option [40 CFR 60.334(j)(2)(ii)].
- iii. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if

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

invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample [40 CFR 60.334(j)(2)(iii)].

- c. Each period during which an exemption due to ice fog is in effect shall be reported in writing to the Division quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter [40 CFR 60.334(j)(3)].
- d. Each period during which an exemption due to emergency fuel usage is in effect shall be included in reports required under 40 CFR 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported [40 CFR 60.334(j)(4)].
- e. The permittee shall report excess carbon monoxide emissions quarterly to the Regional Office. Excess carbon monoxide emissions are defined as any (3) 3-hour period during which the average hourly emissions (arithmetic average) exceed the applicable carbon monoxide permit limit [401 KAR 52:020, Section 10].
- f. All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period [40 CFR 60.334(j)(5)]. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

### 7. Specific Control Equipment Operating Conditions:

- a. The water injection system shall be operated while burning low sulfur diesel fuel to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices.
- b. See Section E, Source Control Equipment Requirements.

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

#### Emissions Units 04 (SCT04) - GE 7EA Combustion Turbine

Emission Unit	Description	Construction Commenced	Maximum Rating	Fuel	Control Equipment
04 (SCT04)	Combustion		1039 MMBtu/hr 104 MW	Natural	Water Injection
	Turbine, GE	August 1999		Gas, Fuel	(fuel oil only), Dry
	7EA, peak load			Oil*	Low NO <sub>x</sub> Burners

<sup>\*</sup>Low ( $\leq 0.05$  percent) Sulfur

### **Applicable Regulations:**

- 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
- 401 KAR 51:160, NO<sub>X</sub> Requirements for Large Utility and Industrial Boilers, incorporating 40 CFR 96 (See Section K)
- 401 KAR 51:210, CAIR NO<sub>X</sub> Annual Trading Program (See Section K)
- 401 KAR 51:220, CAIR NO<sub>X</sub> Ozone Season Trading Program (See Section K)
- 401 KAR 51:230, CAIR SO<sub>2</sub> Trading Program (See Section K)
- 401 KAR 51:240, Cross-State Air Pollution Rule (CSAPR) NO<sub>X</sub> annual trading program (See Section L)
- 401 KAR 51:250, Cross-State Air Pollution Rule (CSAPR) NO<sub>X</sub> ozone season group 2 trading program (See Section L)
- 401 KAR 51:260, Cross-State Air Pollution Rule (CSAPR) SO<sub>2</sub> group 1 trading program (See Section L)
- 401 KAR 52:060, Acid rain permits, incorporating 40 CFR Parts 72 to 78 (See Section J)
- 401 KAR 60:005, Section 2(2)(pp) 40 C.F.R. 60.330 to 60.335 (Subpart GG), Standards of Performance for Stationary Gas Turbines
- 40 CFR Part 75, Continuous Emissions Monitoring (CEM)

## **State-Origin Applicable Regulation:**

401 KAR 63:021, Existing Sources Emitting Toxic Air Pollutants

#### **Non-Applicable Regulation:**

401 KAR 63:002, Section 2(4)(dddd) 40 C.F.R. 63.6080 to 63.6175, Tables 1 to 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

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

## 1. **Operating Limitations:**

a. Operating hours shall not exceed 2,500 hours during any consecutive 12 months. The primary fuel of the emission unit is natural gas with No. 2 fuel oil as a secondary fuel. No. 2 fuel oil shall not be used more than 250 hours during any consecutive 12 months.

### Compliance Method

Compliance shall be demonstrated by calculating monthly the 12-month hours of operation of both fuel oil and natural gas and semi-annual reporting. The permittee shall maintain onsite a log of each 12-month rolling total. See **4. Specific Monitoring Requirements i**, and **5. Specific Recordkeeping Requirements d**.

b. The permittee shall not operate the emission unit below 55 percent load, except during startup and shutdown events. For natural gas, startup events shall be defined as beginning when fuel is first introduced or changed, and ending when premix steady state operation is achieved or after 30 minutes, whichever is first. For fuel oil, startup events shall be defined as beginning when fuel is first introduced or changed and ending after 30 minutes. A shutdown event means going from operating load down to 0 percent load. The emission unit shall not start up more than 200 times per year.

# Compliance Method

Compliance shall be demonstrated by monitoring, recordkeeping and reporting of operational data. See 4. Specific Monitoring Requirements i., 5. Specific Recordkeeping Requirements d., and 6. Specific Reporting Requirements a.

c. The permittee shall continue to comply with all conditions based on 401 KAR 63:022 unless it can demonstrate that a condition is no longer necessary to protect human health and the environment [401 KAR 63:021].

#### 2. Emission Limitations:

- a. Nitrogen oxide emissions shall not exceed, except during startup, shutdown, or malfunction events:
  - 1. 42 ppm by volume at 15 percent oxygen dry basis when combusting number 2 fuel oil [401 KAR 51:017, 40 CFR 60.332]; and
  - 2. 25 ppm by volume at 15 percent oxygen dry basis when combusting natural gas [401 KAR 51:017, 40 CFR 60.332].

#### Compliance Method

Compliance shall be demonstrated by **3. Testing Requirements b.,** and by using continuous emission monitoring or continuous monitoring conducted in accordance with **4. Specific Monitoring Requirements a., b., or c.,** [40 CFR 60.334(a), (b), (c), (g), and (j)].

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

b. The unit is exempt from the emission limits in **2. Emission Limitations a.** when ice fog is deemed a traffic hazard by the permittee [40 CFR 60.332(f)].

### **Compliance Method**

Compliance shall be demonstrated by the reporting specified in **6. Specific Reporting Requirements c**.

- c. Exemptions from the requirements of **2. Emission Limitations a.** shall be granted on a case-by-case basis, as determined by the Division, in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions shall be allowed only while the mandatory water restrictions are in effect. [40 CFR 60.332(i)]
- d. Sulfur dioxide emissions shall not exceed 500 pounds per hour [401 KAR 51:017, 40 CFR 60.333]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

### Compliance Method

Compliance shall be demonstrated by calculation using representative fuel analysis and hourly fuel consumption data from the continuous monitoring system. Formula: Pounds per hour sulfur dioxide when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x density in pounds per gallon (about 7.05 lb/gallon) x percent sulfur/100 x 2.00 lbs sulfur dioxide per lb sulfur (emission factor from vendor) or lbs per hour sulfur dioxide when combusting natural gas = million cubic feet (MMCF) natural gas per hour x 0.6 lb/MMCF (AP-42).

- e. Sulfur content shall not exceed:
  - 1. 2.0 grains/1000 SCF when combusting natural gas [401 KAR 51:017].
  - 2. 0.05% sulfur by weight when combusting fuel oil [401 KAR 51:017].

#### Compliance Methods

Compliance shall be demonstrated by fuel sampling, monitoring, recordkeeping, and reporting. See 4. Specific Monitoring Requirements e., 5. Specific Record Keeping Requirements c., and 6. Specific Reporting Requirements b.

f. Carbon monoxide emissions shall not exceed 75 pounds per hour except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

#### Compliance Methods

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour carbon monoxide emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x

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

0.00692 lbs/gallon (emission factor from vendor); or lbs per hour carbon monoxide emissions when combusting natural gas = MMCF natural gas per hour x 36.15 lb/MMCF (emission factor from vendor).

g. Particulate matter emissions shall not exceed 54 pounds per hour except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

## **Compliance Methods**

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour particulate emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.00167 lbs/gallon (emission factor from AP-42); or lbs per hour particulate emissions when combusting natural gas = MMCF natural gas per hour x 6.73 lbs/MMCF (AP-42 3.1).

h. Volatile organic compound emissions shall not exceed 26 pounds per hour except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

### **Compliance Methods**

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour volatile organic compound emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.00194 lbs/gallon (emission factor from vendor); or lbs per hour volatile organic compound emissions when combusting natural gas = MMCF natural gas per hour x 13.3 lbs/MMCF (AP-42).

i. Beryllium emissions shall not exceed 0.0038 pounds per hour except during startup, shutdown, or malfunction events [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

#### **Compliance Methods**

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour beryllium emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.000000043 lbs/gallon (AP-42); or lbs per hour beryllium emissions when combusting natural gas = MMCF natural gas per hour x 0.000012 lbs/MMCF (AP-42).

j. Sulfuric acid mist emissions shall not exceed 15 pounds per hour except during periods of startup, shutdown, or malfunction [401 KAR 51:017]. See **Section D** of this permit for emission limitations affecting these units and other emission units not described in this subsection.

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

### Compliance Methods

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour sulfuric acid mist emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x 0.423 lbs/gallon x percent fuel sulfur/100; or lbs per hour sulfuric acid mist emissions when combusting natural gas = MMCF natural gas per hour x 0.018 lbs/MMCF (AP-42).

k. Emissions shall not exceed the limits in the table below [401 KAR 63:021].

### **Compliance Methods**

Compliance shall be demonstrated by calculation using emission factors and hourly fuel consumption data from the continuous monitoring system. Formula: lbs per hour emissions when combusting number 2 fuel oil = gallons number 2 fuel oil per hour x Emission Factor (lbs/gallon of fuel oil) or lbs per hour emissions when combusting natural gas = MMCF natural gas per hour x Emission Factor (lbs/MMCF of natural gas).

Pollutant	Emission Limit (lbs/hr, 8-hour	Emission Factor (lbs/gallon of	Emission Factor (lbs/MMCF of
	rolling average)	fuel oil)	natural gas)
Cadmium	0.0642	0.000000667	0.0011
Chromium	0.290	0.00000153	0.0014
Formaldehyde	2.48	0.0000389	0.224*
Mercury	0.00229	0.000000167	0.00026
Lead	0.171	0.00000195	0.0005
Nickel	1.039	0.000000639	0.0021
Copper	1.71	0.0000389	0.00085
Manganese	0.159	0.0000000355	0.00038

<sup>\*</sup> Emission factor for natural gas is from manufacture specifications

#### 3. Testing Requirements:

- a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].
- b. For units not equipped with a NO<sub>x</sub> CEMS, the permittee shall conduct nitrogen oxides performance testing on each unit using the methods required by 40 CFR 60.335(a) at least once every 20 calendar quarters in conjunction with the correlation testing required by 40 CFR Part 75, Appendix E, Section 2.2 and 40 CFR 60.335(b).

#### 4. Specific Monitoring Requirements:

a. Except as provided in **4. Specific Monitoring Requirements c.** (40 CFR 60.334(b)), when using water or steam injection to control NO<sub>x</sub> emissions, the permittee shall install, calibrate, maintain and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water or steam to fuel being fired in each turbine [40 CFR 60.334(a)]. The steam or water

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

Requirements b., to establish acceptable values and ranges. The permittee may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. The permittee shall develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NOx emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. The permittee may meet the requirements of 40 CFR 60.334(g) by developing and keeping on-site (or at a central location for unmanned facilities) a quality-assurance plan, as described in section 2.3 of appendix E and section 1.3.6 of appendix B to 40 CFR Part 75 [40 CFR 60.334(g)].

- b. Except as provided in **4. Specific Monitoring Requirements c.** (40 CFR 60.334(b)), when not using water or steam injection to control NO<sub>X</sub> emissions, the permittee shall use the NO<sub>X</sub> estimation method in 40 CFR Part 75, Appendix E to continuously monitor NO<sub>X</sub> emissions [40 CFR 60.334(c)].
- c. The permittee may, as an alternative to operating the continuous monitoring system described in **4. Specific Monitoring Requirements a.** (40 CFR 60.334(a)) and **4. Specific Monitoring Requirements b.** (40 CFR 60.334(c)), install, certify, maintain, operate, and quality-assure a continuous emission monitoring system (CEMS) consisting of NO<sub>x</sub> and O<sub>2</sub> monitors. As an alternative, a CO<sub>2</sub> monitor may be used to adjust the measured NO<sub>x</sub> concentrations to 15 percent O<sub>2</sub> by either converting the CO<sub>2</sub> hourly averages to equivalent O<sub>2</sub> concentrations using Equation F–14a or F–14b in appendix F to 40 CFR Part 75 and making the adjustments to 15 percent O<sub>2</sub>, or by using the CO<sub>2</sub> readings directly to make the adjustments, as described in Method 20. If the option to use a CEMS is chosen, the CEMS shall be installed, certified, maintained and operated in accordance with 40 CFR 60.334(b) [40 CFR 60.334(b)].
- d. If a unit's operations exceed the level required to be a peaking unit, as defined in 40 CFR 72.2, the permittee shall install and certify a continuous NOx emission monitoring system, if one is currently not installed, no later than December 31 of the following calendar year [40 CFR 75.12(d)(2)].
- e. The permittee shall monitor sulfur content of the fuel being fired in the turbine [40 CFR 60.334(h)(4)]. The frequency of determination of these values shall be as specified in the following approved custom fuel monitoring schedule:
  - 1. The permittee shall sample gaseous fuel for sulfur content every 6 months, unless the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR 60.331(u). The permittee shall use one of the following sources of information to demonstrate that the fuel used is natural gas:
    - i. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less; or

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

- ii. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in 40 CFR Part 75 of Appendix D section 2.3.1.4 or 2.3.2.4 is required [40 CFR 60.334(h)(3)].
- 2. The permittee shall sample the fuel oil in accordance with 40 CFR Part 75, Appendix D, Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 [40 CFR 60.334(i)(1)].
- f. To meet the periodic monitoring requirement for carbon dioxide the permittee shall use the approved alternate procedure of 40 CFR 75, Appendix G in lieu of a continuous emission monitor [401 KAR 52:020, Section 10].
- g. To meet the periodic monitoring requirement for carbon monoxide the permittee shall use the formula provided in **2. Emission Limitations f.** and calculate hourly emissions [401 KAR 52:020, Section 10].
- h. The permittee shall install, calibrate, operate, test, and monitor all continuous monitoring systems and monitoring devices in accordance with 40 CFR 60.13 or 40 CFR 75.
- i. The permittee shall monitor on a daily basis [401 KAR 52:020, Section 10]:
  - 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine,
  - 2. Hours of operation of each combustion turbine,
  - 3. The power output, in MW, of each combustion turbine, and
  - 4. The date and time of the beginning and end of each startup and shutdown.

### 5. Specific Record Keeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 40 CFR 60, Subpart A recorded in a permanent form suitable for inspection [40 CFR 60.7(f)].
- b. Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for 5 years [401 KAR 52:020, Section 10].
- c. The permittee shall maintain a log of all sulfur content measurements [401 KAR 52:020, Section 10].
- d. The permittee shall maintain a daily log of [401 KAR 52:020, Section 10]:

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

- 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine for any consecutive 12 months,
- 2. Hours of operation of each combustion turbine for any 12 consecutive months,
- 3. The power output, in MW, of each combustion turbine for any 12 consecutive months, and
- 4. The date and time of the beginning and end of each startup and shutdown.

### 6. Specific Reporting Requirements:

- a. The permittee shall submit reports every calendar quarter, postmarked by the 30th day following the end of the quarter, the following information [40 CFR 60.7(c)]:
  - 1. The magnitude of excess emissions, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions.
  - 2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
  - 3. The date and time identifying each period during which any continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - 4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- b. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions and monitor downtime are defined as follows [40 CFR 60.334(j)]:
  - 1. Nitrogen oxides.
    - i. For turbines using water or steam to fuel ratio monitoring:
      - A. An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 2. Emission Limitations a., as established during the performance test. Any unit operating hour in which no water or steam is injected into the turbine shall also be considered an excess emission [40 CFR 60.334(j)(1)(i)(A)].
      - B. A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid [40 CFR 60.334(j)(1)(i)(B)].

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

C. Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), and gas turbine load. The permittee does not have to report ambient conditions if the permittee opts to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if the permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) [40 CFR 60.334(j)(1)(i)(C)].

### ii. For turbines using NO<sub>X</sub> and diluent CEMS:

- A. An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>X</sub> concentration exceeds the applicable emission limits in **2. Emission Limitations a.** A"4-hour rolling average NO<sub>X</sub> concentration" is the arithmetic average of the average NO<sub>X</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the 3 unit operating hour average NO<sub>X</sub> concentrations immediately preceding that unit operating hour [40 CFR 60.334(j)(1)(iii)(A)].
- B. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both) [40 CFR 60.334(j)(1)(iii)(B)].
- C. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period. The permittee does not have to report ambient conditions if the permittee opts to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if the permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) [40 CFR 60.334(j)(1)(iii)(C)].
- iii. For turbines using the monitoring estimation method in 40 CFR Part 75, Appendix E without water or steam injection, excess emissions are defined as any 1-hour period during which the average emissions (arithmetic average), calculated in accordance with 40 CFR Part 75, Appendix E, Section 2.1.5, exceeds the applicable nitrogen oxides emission standard [501 KAR 52:020, Section 10].

#### 2. Sulfur dioxide.

- i. For oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent sulfur by weight and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit [40 CFR 60.334(j)(2)(i)].
- ii. If the option to sample each delivery of fuel oil has been selected, the permittee shall immediately switch to one of the other oil sampling options (*i.e.*, daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 percent sulfur by weight. The permittee shall continue to use one

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

of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 6.a.(2)(a) above. When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option[40 CFR 60.334(j)(2)(ii)].

- iii. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample [40 CFR 60.334(j)(2)(iii)].
- c. Each period during which an exemption due to ice fog is in effect shall be reported in writing to the Division quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter [40 CFR 60.334(j)(3)].
- d. Each period during which an exemption due to emergency fuel usage is in effect shall be included in reports required under 40 CFR 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported [40 CFR 60.334(j)(4)].
- e. The permittee shall report excess carbon monoxide emissions quarterly to the Regional Office. Excess carbon monoxide emissions are defined as any 3-hour period during which the average hourly emissions (arithmetic average) exceed the applicable carbon monoxide permit limit [401 KAR 52:020, Section 10].
- f. All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period [40 CFR 60.334(j)(5)]. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

#### 7. Specific Control Equipment Operating Conditions:

- a. The water injection system shall be operated while burning low sulfur diesel fuel to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices.
- b. The Dry Low- NO<sub>X</sub> Burners shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's specifications and standard operating practices.
- c. See Section E, Source Control Equipment Requirements.

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

**Emissions Units 05 - 07 (SCT05 - SCT07) - Combustion Turbines** 

Emission Unit	Description	Construction Commenced	Maximum Rating	Fuel	Control Equipment
05 (SCT05)	Combustion Turbine, General Electric 7EA	August 2001	1039 MMBtu/hr 114.91 MW	Natural Gas, Fuel Oil*	Water Injection, Dry Low NOx burners
06 (SCT06)	Combustion Turbine, General Electric 7EA	August 2001	1039 MMBtu/hr 114.91 MW	Natural Gas, Fuel Oil*	Water Injection, Dry Low NOx burners
07 (SCT07)	Combustion Turbine, General Electric 7EA	August 2001	1039 MMBtu/hr 114.91 MW	Natural Gas, Fuel Oil*	Water Injection, Dry Low NO <sub>X</sub> burners

<sup>\*</sup>Low ( $\leq 0.05$  percent) Sulfur

## **Applicable Regulations:**

- 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
- 401 KAR 51:160, NO<sub>X</sub> Requirements for Large Utility and Industrial Boilers, incorporating 40 CFR 96 (See Section K)
- 401 KAR 51:210, CAIR NO<sub>X</sub> Annual Trading Program (See Section K)
- 401 KAR 51:220, CAIR NO<sub>X</sub> Ozone Season Trading Program (See Section K)
- 401 KAR 51:230, CAIR SO<sub>2</sub> Trading Program (See Section K)
- 401 KAR 51:240, Cross-State Air Pollution Rule (CSAPR) NOx annual trading program (See Section L)
- 401 KAR 51:250, Cross-State Air Pollution Rule (CSAPR) NO<sub>X</sub> ozone season group 2 trading program (See Section L)
- 401 KAR 51:260, Cross-State Air Pollution Rule (CSAPR) SO<sub>2</sub> group 1 trading program (See Section L)
- 401 KAR 52:060, Acid Rain Permits, incorporating 40 CFR Parts 72 to 78 (See Section J)
- 401 KAR 60:005, Section 2(2)(pp) 40 C.F.R. 60.330 to 60.335 (Subpart GG), Standards of Performance for Stationary Gas Turbines
- 40 CFR Part 75, Continuous Emissions Monitoring (CEM)

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

### **State-Origin Applicable Regulations:**

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

401 KAR 63:021, Existing Sources Emitting Toxic Air Pollutants

#### **Non-Applicable Regulation:**

401 KAR 63:002, Section 2(4)(dddd) 40 C.F.R. 63.6080 to 63.6175, Tables 1 to 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

#### 1. Operating Limitations:

a. The primary fuel is natural gas with No. 2 fuel oil as a secondary fuel. No. 2 fuel oil shall not be used more than 876 hours during any consecutive 12 months for each combustion turbine.

## Compliance Method

Compliance shall be demonstrated by calculating monthly the 12-month hours of operation of both fuel oil and natural gas and semi-annual reporting. The permittee shall maintain onsite a log of each 12-month rolling total. See **4. Specific Monitoring Requirements e.**, and **5. Specific Recordkeeping Requirements d.** 

b. The permittee shall not operate the emission units below 55 percent load, except during startup and shutdown events. For natural gas, startup events shall be defined as beginning when fuel is first introduced, or changed, and ending when premix steady state operation is achieved or after 30 minutes, whichever is first. For fuel oil, startup events shall be defined as beginning when fuel is first introduced or changed and ending after 30 minutes. A shutdown event begins when fuel is reduced or changed and ends when the unit ceases to operate. Each emission unit shall not start up more than 200 times per year.

#### Compliance Method

Compliance shall be demonstrated by monitoring, recordkeeping and reporting of operational data. See 4. Specific Monitoring Requirements e., 5. Specific Recordkeeping Requirements d., and 6. Specific Reporting Requirements a.

c. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants [401 KAR 63:020].

#### Compliance Method:

The Cabinet determines that source is in compliance with 401 KAR 63:020 based on the rate of emissions of airborne toxics determined by the cabinet using information provided in the application and any supplemental information submitted by the source

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

### 2. Emission Limitations:

- a. Nitrogen oxide emissions shall not exceed, except during startup, shutdown, or malfunction events:
  - 1. An hourly average of 12 ppm by volume at 15 percent oxygen on a dry basis, and an annual (12 month rolling) average of 9 ppm by volume at 15 percent oxygen on a dry basis while combusting natural gas [401 KAR 51:017, 40 CFR 60.332].
  - 2. An hourly average of 42 ppm by volume at 15 percent oxygen on a dry basis, while firing low sulfur fuel oil [401 KAR 51:017, 40 CFR 60.332].

## Compliance Method

Continuous compliance shall be demonstrated by a continuous emission monitor (CEM) [401 KAR 51:017].

b. These units are exempt from the emission limits in **2. Emission Limitations a.** when ice fog is deemed a traffic hazard by the permittee [40 CFR 60.332(f)].

## Compliance Method

Compliance shall be demonstrated by the reporting specified in **6. Specific Reporting Requirements c**.

- c. Exemptions from the requirements of **2. Emission Limitations a.**, shall be granted on a case-by-case basis, as determined by the Division, in specific geographical areas where mandatory water restrictions are required by governmental agencies because of drought conditions. These exemptions shall be allowed only while the mandatory water restrictions are in effect. [40 CFR 60.332(i)]
- d. Sulfur dioxide emissions shall not exceed 0.015 percent by volume at 15 percent oxygen and on a dry basis [40 CFR 60.333(a)].

#### Compliance Method

Compliance with the fuel sulfur content limits in **2. Emission Limitations e.** below constitutes compliance with this sulfur dioxide limit.

- e. Sulfur content shall not exceed:
  - 1. 2.0 grains/1000 SCF when combusting natural gas [401 KAR 51:017].
  - 2. 0.05% sulfur by weight when combusting fuel oil [401 KAR 51:017].

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

#### Compliance Method

Compliance shall be demonstrated by fuel sampling, monitoring, recordkeeping, and reporting. See 4. Specific Monitoring Requirements b., 5. Specific Recordkeeping Requirements c., and 6. Specific Reporting Requirements b.

- f. Carbon monoxide emissions shall not exceed, except during startup, shutdown, or malfunction events:
  - 1. 25 ppm by volume at 15 % oxygen, on a dry basis, during any 3-hour average period while combusting natural gas [401 KAR 51:017].
  - 2. 61 ppm by volume at 15 % oxygen, on a dry basis, during any 3-hour average period while combusting fuel oil [401 KAR 51:017].

### **Compliance Method**

Continuous compliance shall be demonstrated by a continuous emission monitor (CEM).

- g. Particulate matter emissions shall not exceed, except during startup, shutdown, or malfunction events:
  - 1. 5 pounds per hour for each unit, based on any 3-hour average, while firing natural gas.

#### **Compliance Method**

Compliance shall be demonstrated by this formula: lbs per hour particulate emissions = MMCF natural gas per hour x 5.0531 lbs/MMCF (2000 application –manufacture's specification).

2. 10 pounds per hour for each unit, based on any 3-hour average while combusting fuel oil.

#### Compliance Method

Compliance shall be demonstrated by this formula: lbs per hour particulate emissions = gallons per hour x 0.0012766 lbs/gal (2000 application –manufacture's specification).

h. Total formaldehyde emissions shall not exceed 10 tons for all units during any consecutive 12-month total.

#### Compliance Method

Compliance shall be demonstrated by this formula: tons formaldehyde emissions = (total gallons fuel oil x 0.0000389 lbs/gal + total MMCF natural gas usage x 0.224 lbs/MMCF)/2000 lbs/ton (manufacture specifications) [401 KAR 63:021].

## 3. Testing Requirements:

a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].

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

b. In conducting performance tests required by 40 CFR 60.8, the permittee shall use as test methods and procedures the test methods in Appendix A of Part 60 or other methods or procedures as specified in 40 CFR 60.335, except as provided for in 40 CFR 60.8(b) [40 CFR 60.335(b)].

### 4. Specific Monitoring Requirements:

- a. The permittee shall install, calibrate, maintain, and operate the nitrogen oxides Continuous Emissions Monitor (CEM) in accordance with 40 CFR 60.334(b) [40 CFR 75, 401 KAR 52:020, Section 10, 40 CFR 60.334].
- b. The permittee shall monitor sulfur content of the fuel being fired in the turbine [40 CFR 60.334(h)(4)]. The frequency of determination of these values shall be as specified in the following approved custom fuel monitoring schedule:
  - 1. The permittee shall sample gaseous fuel for sulfur content every 6 months, unless the gaseous fuel is demonstrated to meet the definition of natural gas in 40 CFR 60.331(u). The permittee shall use one of the following sources of information to demonstrate that the fuel used is natural gas [40 CFR 60.334(h)(3)]:
    - i. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 scf or less [40 CFR 60.334(h)(3)(i)]; or
    - ii. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 scf. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR part 75 is required [40 CFR 60.334(h)(3)(ii)].
  - 2. The permittee shall sample the fuel oil in accordance with 40 CFR Part 75, Appendix D, Sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 [40 CFR 60.334(i)(1)].
- c. To meet the periodic monitoring requirement for carbon monoxide the permittee shall use a continuous emission monitor (CEM) [401 KAR 52:020, Section 10].
- d. The permittee shall install, calibrate, operate, test, and monitor all continuous monitoring systems and monitoring devices in accordance with 40 CFR 60.13 or 40 CFR 75.
- e. The permittee shall monitor on a daily basis [401 KAR 52:020, Section 10]:
  - 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine,
  - 2. Hours of operation of each combustion turbine,
  - 3. The power output, in MW, of each combustion turbine, and
  - 4. The date and time of the beginning and end of each startup and shutdown.

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

## 5. Specific Record Keeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 40 CFR 60, Subpart A recorded in a permanent form suitable for inspection [40 CFR 60.7(f)].
- b. Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for 5 years [401 KAR 52:020, Section 10].
- c. The permittee shall maintain a log of all sulfur content measurements [401 KAR 52:020, Section 10].
- d. The permittee shall maintain a daily log of [401 KAR 52:020, Section 10]:
  - 1. The quantity of No. 2 fuel oil, in gallons, and natural gas, in millions of cubic feet, fired in each combustion turbine for any consecutive 12 months,
  - 2. Hours of operation of each combustion turbine for any 12 consecutive months,
  - 3. The power output, in MW, of each combustion turbine for any 12 consecutive months, and
  - 4. The date and time of the beginning and end of each startup and shutdown.

### **6.** Specific Reporting Requirements:

- a. The permittee shall submit reports every calendar quarter, postmarked by the 30th day following the end of the quarter, the following information [40 CFR 60.7(c)]:
  - 1. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factors used, and the date and time of commencement and completion of each period of excess emissions.
  - 2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emissions unit. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
  - 3. The date and time identifying each period during which any continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
  - 4. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

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

b. For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions and monitor downtime are defined as follows [40 CFR 60.334(j)]:

## 1. Nitrogen oxides.

- i. An hour of excess emissions shall be any unit operating hour in which the 4-hour rolling average NO<sub>X</sub> concentration exceeds the applicable emission limits in **2. Emission Limitations a**. A "4-hour rolling average NO<sub>X</sub> concentration" is the arithmetic average of the average NO<sub>X</sub> concentration measured by the CEMS for a given hour (corrected to 15 percent O<sub>2</sub> and, if required under 40 CFR 60.335(b)(1), to ISO standard conditions) and the 3 unit operating hour average NO<sub>X</sub> concentrations immediately preceding that unit operating hour [40 CFR 60.334(j)(1)(iii)(A)].
- ii. A period of monitor downtime shall be any unit operating hour in which sufficient data are not obtained to validate the hour, for either NO<sub>x</sub> concentration or diluent (or both) [40 CFR 60.334(j)(1)(iii)(B)].
- iii. Each report shall include the ambient conditions (temperature, pressure, and humidity) at the time of the excess emission period. The permittee does not have to report ambient conditions if the permittee opts to use the worst case ISO correction factor as specified in 40 CFR 60.334(b)(3)(ii), or if the permittee is not using the ISO correction equation under the provisions of 40 CFR 60.335(b)(1) [40 CFR 60.334(j)(1)(iii)(C)].

#### 2. Sulfur dioxide.

- i. For oil samples obtained using daily sampling, flow proportional sampling, or sampling from the unit's storage tank, an excess emission occurs each unit operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.05 percent sulfur by weight and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit [40 CFR 60.334(j)(2)(i)].
- ii. If the option to sample each delivery of fuel oil has been selected, the permittee shall immediately switch to one of the other oil sampling options (*i.e.*, daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.05 percent sulfur by weight. The permittee shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 6.a.(2)(a) above. When all of the fuel from the delivery has been burned, the permittee may resume using the as-delivered sampling option [40 CFR 60.334(j)(2)(ii)].
- iii. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only unit operating hours, and ends on the date and hour of the next valid sample [40 CFR 60.334(j)(2)(iii)].

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

- c. Each period during which an exemption due to ice fog is in effect shall be reported in writing to the Division quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter [40 CFR 60.334(j)(3)].
- d. Each period during which an exemption due to emergency fuel usage is in effect shall be included in reports required under 40 CFR 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported [40 CFR 60.334(j)(4)].
- e. The permittee shall report excess carbon monoxide emissions quarterly to the Regional Office. Excess carbon monoxide emissions are defined as any 3-hour period during which the average hourly emissions (arithmetic average) exceed the applicable carbon monoxide permit limit [401 KAR 52:020, Section 10].
- f. All reports required under 40 CFR 60.7(c) shall be postmarked by the 30th day following the end of each 6-month period [40 CFR 60.334(j)(5)]. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

### 7. Specific Control Equipment Operating Conditions:

- a. The water injection system shall be operated while burning low sulfur, number 2 fuel oil to maintain compliance with permitted emission limitations, in consistent with manufacturer's specifications and standard operating practices.
- b. The Dry Low- NO<sub>X</sub> burners shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer's and standard operating practices.
- c. See Section E, Source Control Equipment Requirements.

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

#### Emissions Units 09 and 10 - GE LMS 100 Combustion Turbines

Emission Unit	Description	Construction Commenced	Nominal Rating	Fuel	Control Equipment
	GE LMS 100		793.9		Water Injection,
09	Combustion	September 2008	MMBtu/hr	Natural	Selective Catalytic
09	Turbines,		102.1 MW	Gas	Reduction,
	simple cycle		output		Catalytic Oxidation
	GE LMS 100	Cantomban 2009	793.9		Water Injection,
10	Combustion		MMBtu/hr	Natural	Selective Catalytic
10	Turbines, September 2008	102.1 MW	Gas	Reduction,	
	simple cycle		output		Catalytic Oxidation

## **Applicable Regulations:**

- 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality
- 401 KAR 51:160, NO<sub>X</sub> Requirements for Large Utility and Industrial Boilers, incorporating 40 CFR 96 (See Section K).
- 401 KAR 51:210, CAIR NO<sub>X</sub> Annual Trading Program (See Section K).
- 401 KAR 51:220, CAIR NO<sub>X</sub> Ozone Season Trading Program (See Section K)
- 401 KAR 51:230, CAIR SO<sub>2</sub> Trading Program (See Section K)
- 401 KAR 51:240, Cross-State Air Pollution Rule (CSAPR) NO<sub>x</sub> annual trading program (See Section L)
- 401 KAR 51:250, Cross-State Air Pollution Rule (CSAPR) NO<sub>X</sub> ozone season group 2 trading program (See Section L)
- 401 KAR 51:260, Cross-State Air Pollution Rule (CSAPR) SO<sub>2</sub> group 1 trading program (See Section L)
- 401 KAR 52:060, Acid Rain Permits, incorporating 40 CFR Parts 72 to 78 (See Section J)
- 401 KAR 60:005, Section 2(2)(ffff) 40 C.F.R. 60.4300 to 60.4420, Table 1 (Subpart KKKK), Standards of Performance for Stationary Combustion Turbines
- 40 CFR Part 75, Continuous Emissions Monitoring (CEM)

#### **State Origin Applicable Regulation:**

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

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

## **Non-Applicable Regulation:**

401 KAR 63:002, Section 2(4)(dddd) 40 C.F.R. 63.6080 to 63.6175, Tables 1 to 7 (Subpart YYYY), National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

### 1. **Operating Limitations:**

a. Operating hours shall not exceed 4,000 hours for each combustion turbine during any consecutive 12-month period [401 KAR 51:017].

## Compliance Method

Compliance is demonstrated by **4. Specific Monitoring Requirements g**.

b. The permittee shall not operate any combustion turbine below load levels at which performance testing has proven compliance with emissions limitations, except during startup and shutdown. Startup and shutdown shall be limited to no more than 1 hour for each startup and 15-minutes for each shutdown event. Each CT is limited to 365 startup events per calendar year [401 KAR 51:017].

### Compliance Method

Compliance is demonstrated by **4. Specific Monitoring Requirements g**. and **5. Specific Recordkeeping Requirements d**.

c. The permittee shall use only pipeline quality natural gas [401 KAR 51:017].

#### Compliance Method

Compliance is demonstrated by **4. Specific Monitoring Requirements f**.

- d. The permittee shall install all control devices required to meet Best Available Control Technology (BACT) [401 KAR 51:017].
  - 1. BACT for nitrogen oxides (NO<sub>x</sub>) is water injection and SCR.
  - 2. BACT for carbon monoxide and volatile organic compounds is catalytic oxidation.
  - 3. BACT for particulate matter (PM/PM10/PM2.5), sulfur dioxide, and sulfuric acid mist is the use of pipeline quality natural gas with a sulfur content of less than or equal to 20 grains/100 dscf.
- e. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants [401 KAR 63:020].

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

## **Compliance Method:**

The Cabinet determines that source is in compliance with 401 KAR 63:020 based on the rate of emissions of airborne toxics determined by the Cabinet using information provided in the application and any supplemental information submitted by the source.

#### 2. Emission Limitations:

- a. Nitrogen oxides emissions shall not exceed:
  - 1. 5 ppm by volume at 15 percent oxygen, dry basis, and 0.165 lbs/MWh, on a 1-hour average, except during startup or shutdown [401 KAR 51:017].
  - 2. 16.8 lbs/hour on an annual average [NAAQS].

### Compliance Method

Continuous compliance with these limits shall be demonstrated by a continuous emission monitor (CEM). Compliance with these limits constitutes compliance with the nitrogen oxide limit contained in 40 CFR 60, Subpart KKKK.

- b. Carbon monoxide emissions shall not exceed:
  - 1. 6 ppm by volume at 15% oxygen, dry basis, and 94.5% reduction, on a 3-hour average, except during startup or shutdown[401 KAR 51:017].
  - 2. 12.3 lbs/hour on a 1- hour average [NAAQS].

#### Compliance Method

Continuous compliance with these limits except for the 94.5% reduction requirement shall be demonstrated by a continuous emission monitor. The 94.5% reduction requirement shall be demonstrated by **3. Testing Requirements b**.

- c. Sulfur dioxide emissions shall:
  - 1. Be limited by the use of pipeline quality natural gas only [401 KAR 51:017].
  - 2. Not exceed 0.10 lbs/hour on a 3-hour average [NAAQS].

#### Compliance Method

Compliance shall be demonstrated by contracting for natural gas with a fuel sulfur content of less than or equal to 20 grains/100 dscf. Pursuant to 40 CFR 60.4365, compliance with the fuel sulfur limit shall be demonstrated by fuel sampling or supplier guarantees. Compliance with these limits constitutes compliance with the sulfur dioxide limit contained in 40 CFR 60, Subpart KKKK.

d. Sulfuric acid mist emissions shall:

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

- 1. Be limited by the use of pipeline quality natural gas only [401 KAR 51:017].
- 2. Not exceed 0.008 lbs/hour on a 3-hour average [401 KAR 51:017].

## Compliance Method

Compliance shall be demonstrated by contracting for natural gas with a fuel sulfur content of less than or equal to 20 grains/100 dscf. Compliance with the fuel sulfur limit shall be demonstrated by fuel sampling or supplier guarantees [40 CFR 60.4365].

- e. Particulate matter emissions shall:
  - 1. Be limited by the use of pipeline quality natural gas only [401 KAR 51:017].
  - 2. Not exceed 10 lbs/hour (total) and 6 lbs/hour (filterable) on a 24-hour average [NAAQS].

## **Compliance Method**

Compliance shall be demonstrated by the use of pipeline quality natural gas.

f. Volatile organic compound (VOC) emissions shall not exceed 3.8 pounds per hour as methane, on a 3-hour average [401 KAR 51:017].

## **Compliance Method**

Compliance with this limit shall be demonstrated by compliance with the carbon monoxide limit.

#### 3. Testing Requirements:

- a. Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].
- b. Performance tests for carbon monoxide and nitrogen oxides shall be conducted on an annual basis, no more than 14 calendar months following the previous performance test. The permittee shall use as test methods and procedures the test methods in Appendix A of Part 60 or other methods or procedures as specified in 40 CFR 60.4400, 4405 and 4415, except as provided for in 40 CFR 60.8(b).

#### 4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, maintain, and operate a nitrogen oxides continuous emissions monitor consisting of a NOx monitor and a diluent gas (oxygen or carbon dioxide) monitor to determine the hourly. NOx emission rate in parts per million (ppm) or pounds per million British thermal units (lb/MMBtu); and install, calibrate, maintain, and operate watt meters to continuously measure the gross electrical output of each unit's megawatt-hours and fuel flow meters to continuously measure the heat input to each unit [401 KAR 52:020 Section 10, 40 CFR 60.4335 and 40 CFR 75]. The watt meters and fuel flow meters shall be installed,

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

calibrated, maintained, and operated according to manufacturer's instructions [40 CFR 60.4345(d)].

- b. Each NO<sub>x</sub> diluent CEMS shall be installed and certified according to Performance Specification 2 (PS 2) in Appendix B to 40 CFR 60, except the 7-day calibration drift is based on unit operating days, not calendar days. Alternatively, a NO<sub>x</sub> diluent CEMS that is installed and certified according to Appendix A of 40 CFR 75 is acceptable. The relative accuracy test audit (RATA) of the CEMS shall be performed on a lb/MMBtu basis [40 CFR 60.4345(a)].
- c. As specified in 40 CFR 60.13(e)(2), during each full unit operating hour, both the NO<sub>X</sub> monitor and the diluent monitor shall complete a minimum of 1 cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour, to validate the hour. For partial unit operating hours, at least one valid data point shall be obtained with each monitor for each quadrant of the hour in which the unit operates. For unit operating hours in which required quality assurance and maintenance activities are performed on the CEMS, a minimum of 2 valid data points (one in each of 2 quadrants) are required for each monitor to validate the NO<sub>X</sub> emission rate for the hour [40 CFR 60.4345(b)].
- d. The permittee shall use the calculated hourly average emission rates as specified in 40 CFR 60.4350 to assess NO<sub>x</sub> excess emissions on a 4-hour rolling average basis, as described in 40 CFR 60.4380(b)(1).
- e. The permittee shall install, calibrate, maintain, and operate a carbon monoxide continuous emissions monitor. The permittee shall install, calibrate, operate, test, and monitor all continuous monitoring systems and monitoring devices in accordance with 40 CFR 60.13 or 40 CFR 75 [401 KAR 52:020, Section 10].
- f. Pursuant to 40 CFR 60.4360, the total sulfur content of the fuel shall be monitored as specified in 40 CFR 60.4370 and 40 CFR 60.4415, except that one of the following sources of information may be used to make the required demonstration:
  - 1. The fuel quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract for the fuel specifying that the maximum total sulfur content shall not exceed 20 grains of sulfur or less per 100 standard cubic feet [40 CFR 60.4365(a)]; or
  - 2. Representative fuel sampling data which show that the sulfur content of the fuel does not exceed 26 ng SO<sub>2</sub>/J (0.060 lb SO<sub>2</sub>/MMBtu) [40 CFR 60.4365(b)].
- g. The permittee shall monitor the hours of operation of each combustion turbine [401 KAR 51:017].

#### 5. Specific Record Keeping Requirements:

a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other

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

information required by 40 CFR 60, Subpart A recorded in a permanent form suitable for inspection [40 CFR 60.7(f)].

- b. Records, including those documenting the results of each compliance test and all other records and reports required by this permit, shall be maintained for 5 years [401 KAR 52:020, Section 10].
- c. The permittee shall maintain a log of all sulfur content measurements [401 KAR 51:017].
- d. The permittee shall maintain a daily log of the following for each combustion turbine:
  - 1. The quantity of natural gas, in millions of cubic feet, fired in each combustion turbine, for any consecutive 12 months [401 KAR 52:020 Section 10];
  - 2. The hours of operation for any consecutive 12 months [401 KAR 51:017];
  - 3. The date and time of the beginning and end of each startup and shutdown [401 KAR 52:020 Section 10].

#### **6.** Specific Reporting Requirements:

- a. For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content, the permittee shall submit reports of excess emissions and monitor downtime, in accordance with 40 CFR 60.7(c). Excess emissions shall be reported for all periods of unit operation, including start-up, shutdown, and malfunction [40 CFR 60.4375].
- b. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.
- c. A written report of the results of each performance test shall be submitted before the close of business on the 60th day following the completion of the performance test [40 CFR 60.4375(a)].

#### 7. Specific Control Equipment Operating Conditions:

- a. Control equipment shall be operated, consistent with manufacturer's design specifications and good engineering practices [401 KAR 50:055].
- b. See Section E, Source Control Equipment Requirements.

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

Emissions Unit 11, 13, 14 - Emergency Fire Pump and Black Start Emergency Generators

Emission Unit	Description*	Construction Commenced	Rating	Fuel	Control Equipment
11	Emergency Fire Pump, Cummins 6BTA5.9Fl	1995	208 hp	Diesel	None
13	Black Start Emergency Generators, Caterpillar G3516	2001	2,347 hp	Diesel	None
14	Black Start Emergency Generators, Caterpillar G3516	2001	2,347 hp	Diesel	None

#### **Applicable 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

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.

### 1. **Operating Limitations:**

- a. The permittee shall comply with 40 CFR 63, Subpart ZZZZ no later than May 3, 2013 [40 CFR 63.6595(a)].
- b. The permittee shall [40 CFR 63.6603(a) and 40 CFR 63 Table 2d]:
  - 1. Change oil and filter every 500 hours of operation or annually, whichever comes first;
  - 2. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and
  - 3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- c. The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement above. The oil analysis shall be performed at the same frequency specified for changing the oil as described above. The analysis program shall at a minimum analyze the following 3 parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee shall change the oil within 2 days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee shall change the oil within 2 days or before commencing operation, whichever is later. The permittee shall keep records of the parameters that are

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

analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program shall be part of the maintenance plan for the engine [40 CFR 63.6625(i)].

- d. The permittee shall be in compliance with the emission limitations and operating limitations at all times [40 CFR 63.6605(a)].
- e. At all times the permittee shall operate and maintain the engine, 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 the permittee to make 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 Division which 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 63.6605(b)].
- f. The permittee shall operate and maintain the engine and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions [40 CFR 63.6625(e), 40 CFR 63.6640(a)].
- g. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes [40 CFR 63.6625(h)].
- h. The permittee shall operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (3) below. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year for each engine is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (3) below, the engine will not be considered an emergency engine under 40 CFR Subpart ZZZZ and will need to meet all requirements for non-emergency engines [40 CFR 63.6640(f)].
  - 1. There is no time limit on the use of the engine in emergency situations [40 CFR 63.6640(f)(1)].
  - 2. The permittee may operate the emission units for any combination of the purposes specified 40 CFR 63.6640(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by 40 CFR 63.6640(f)(2) [40 CFR 63.6640(f)(2)].
    - i. The emission units 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

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

maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year [40 CFR 63.6640(f)(2)(i)].

- 3. The emission units 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 63.6640(f)(2). Except as provided 40 CFR 63.6640(f)(4)(i) and (ii), 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 [40 CFR 63.6640(f)(4)].
  - 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 [40 CFR 63.6640(f)(4)(ii)]:
    - A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator [40 CFR 63.6640(f)(4)(ii)(A)].
    - 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 [40 CFR 63.6640(f)(4)(ii)(B)].
    - C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines [40 CFR 63.6640(f)(4)(ii)(C)].
    - D. The power is provided only to the facility itself or to support the local transmission and distribution system [40 CFR 63.6640(f)(4)(ii)(D)].
    - 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 balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine permittee [40 CFR 63.6640(f)(4)(ii)(E)].

#### Compliance Method

Compliance shall be demonstrated by monitoring, recordkeeping and reporting of operational data. See 4. Specific Monitoring Requirements, 5. Specific Recordkeeping Requirements, and 6. Specific Reporting Requirements.

#### 2. Emission Limitations:

Not applicable.

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

### 3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].

#### 4. Specific Monitoring Requirements:

The permittee shall install a non-resettable hour meter if one is not already installed [40 CFR 63.6625(f)].

### 5. Specific Record Keeping Requirements:

- a. The permittee shall keep the following records [40 CFR 63.6655(a)]:
  - 1. A copy of each notification and report to comply with 40 CFR 63, Subpart ZZZZ [40 CFR 63.6655(a)(1)].
  - 2. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment [40 CFR 63.6655(a)(2)].
  - 3. Records of all required maintenance performed on the air pollution control and monitoring equipment [40 CFR 63.6655(a)(4)].
  - 4. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation [40 CFR 63.6655(a)(5)].
- b. The permittee shall maintain records in a form suitable and readily available for expeditious review as specified in 40 CFR 63.10(b)(1). The permittee shall keep each record in hard copy or electronic form for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record [40 CFR 63.10(b)(1), 40 CFR 63.6660(a)].
- c. The permittee shall keep records of the maintenance conducted to demonstrate that the permittee operated and maintained the engine and after-treatment control device (if any) according to its own maintenance plan [40 CFR 63.6655(e)].
- d. The permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The permittee shall document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for purposes in 40 CFR 63.6640(f)(2)(ii) or (iii) or 40 CFR 63.440(f)(4), the permittee shall keep records of the notification of the emergency situation, and the date, the start time, and end time the engine was operated as part of demand response [40 CFR 63.6655(f)].
- e. See Section F, Monitoring, Recordkeeping, and Reporting Requirements.

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

### 6. Specific Reporting Requirements:

- a. The permittee shall report each instance in which it did not meet the operating limitations in this permit. These instances are deviations from operating limitations in 40 CFR 63 Subpart ZZZZ and shall be reported in accordance with 40 CFR 63.6650 [40 CFR 63.6640(b)].
- b. The permittee shall report all deviations in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A) [40 CFR 63.6650(f)].
- c. If the emissions units operate or are contractually obligated to be available for more than 15 hours per year, each, for the purposes specified in 40 CFR 63.6640(f)(2)(ii) or (iii) or 40 CFR 63.440(f)(4), the permittee shall report the information in 40 CFR 63.6650(h)(1) annually according to the requirements in 40 CFR 63.6650(h)(2)-(3) [40 CFR 63, Subpart ZZZZ, Appendix, Table 7].
- d. See Section F, Monitoring, Recordkeeping, and Reporting Requirements.

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

#### **Emissions Unit 15 – Data Center Emergency Generator**

#### **Description:**

Emergency Generator, Cummins QSB5-G5

Rating: 176 HP-HR

Fuel: Diesel

Construction Commenced: 2017

#### **Applicable Regulations:**

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.

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 meet the requirements for 40 CFR 60, Subpart IIII, for compression emission engines, and no further requirements apply for such engines under 40 CFR 63, Subpart ZZZZ. [40 CFR 63.6590(c)]
- b. The engine shall be installed and configured according to the manufacturer's emission related specifications. [40 CFR 60.4211(c)]
- c. If the engine is not installed, configured, operated and maintained according to the manufacturer's emission related written instructions, or the emission related settings are changed in a way that is not permitted by the manufacturer, the permittee shall keep 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, the permittee shall conduct an initial performance test to 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 emission related settings have been changed in a way that is not permitted by the manufacturer. [40 CFR 60.4211(g)(2)]
- d. The permittee shall use ultra-low sulfur diesel fuel that meets the requirements for non-road diesel fuel at 40 CFR 80.510(b). [40 CFR 60.4207(b)]

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

e. The permittee shall operate and maintain the engine to achieve the emission standards as required in 40 CFR 60.4205 over the entire life of the engine [40 CFR 60.4206].

- f. The permittee shall operate and maintain the engine according to the manufacturer's emission-related written instructions and change only those emission-related settings that are permitted by the manufacturer [40 CFR 60.4211(a).
- g. The permittee shall operate the emergency stationary ICE according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE 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 in 40 CFR 60.4211(f)(1) through (3), is prohibited. If the engine is not operated according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60 Subpart IIII 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. The permittee may operate the emergency stationary ICE for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) 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 in 40 CFR 60.4211(f)(2). Except as provided in 40 CFR 60.4211(f)(3)(i), 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 [40 CFR 60.4211(f)(3)].
    - 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 [40 CFR 60.4211(f)(3)(i)]:

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

- A. The engine is dispatched by the local balancing authority or local transmission and distribution system operator [40 CFR 60.4211(f)(3)(i)(A)];
- 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 [40 CFR 60.4211(f)(3)(i)(B)].
- C. The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines [40 CFR 60.4211(f)(3)(i)(C)].
- D. The power is provided only to the facility itself or to support the local transmission and distribution system [40 CFR 60.4211(f)(3)(i)(D)].
- 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 balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine's permittee [40 CFR 60.4211(f)(3)(i)(E)].

### 2. Emission Limitations:

a. The permittee shall comply with the emission standards for new non-road compression engines in 40 CFR 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE [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 an engine certified to the emission standards and the engine shall be installed and configured according to the manufacturer's specifications [40 CFR 60.4205(b) and 40 CFR 60.4211(c)].

b. The permittee shall meet the emission standards over the life of the engine [40 CFR 60.4206].

#### 3. Testing Requirements:

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 4].

#### 4. Specific Monitoring Requirements:

If the emergency engine does not meet the standards applicable to non-emergency engines, the permittee shall install a non-resettable hour meter prior to startup of the engine [40 CFR 60.4209(a)].

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

### 5. Specific Record Keeping Requirements:

The permittee is not required to submit an initial notification. 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 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)]

### 6. Specific Reporting Requirements:

- a. If the engine operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the requirements in 40 CFR 60.4214(d)(1) through (3) [40 CFR 60.4214(d)].
  - 1. The report shall contain the following information [40 CFR 60.4214(d)(1)]:
    - i. Company name and address where the engine is located [40 CFR 60.4214(d)(1)(i)].
    - ii. Date of the report and beginning and ending dates of the reporting period [40 CFR 60.4214(d)(1)(ii)].
    - iii. Engine site rating and model year [40 CFR 60.4214(d)(1)(iii)].
    - iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place [40 CFR 60.4214(d)(1)(iv)].
    - 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 [40 CFR 60.4214(d)(1)(vii)].
  - 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 [40 CFR 60.4214(d)(2)].
  - 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, if the reporting form specific to 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 [40 CFR 60.4214(d)(3)].
- b. See Section F, Monitoring, Recordkeeping, and Reporting Requirements.

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

#### **Emission Units 16 and 17 – Natural Gas Fired Indirect Heat Exchangers**

#### **Description:**

Units 4 and 5 Combustion Turbine Gas Preheater (4.8 MMBtu/hr – gas fired) - Construction: 08/2001

Units 6 and 7 Combustion Turbine Gas Preheater (8.0 MMBtu/hr – gas fired) - Construction: 08/2001

#### **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. Startups and shutdowns shall be conducted according to either [401 KAR 59:015 Section 7(1)(e)]:
  - 1. The manufacturer's recommended procedures or [401 KAR 59:015 Section 7(1)(e)(1)];
  - 2. 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)(2)];

Compliance Demonstration Method for a through d:

See 5. Specific Recordkeeping Requirements b.

#### 2. Emission Limitations:

- a. The particulate emissions from each stack shall not exceed 0.53 lb/MMBtu [401 KAR 59:015 Section 4(1)(c)].
- b. When using natural gas, emissions shall not exceed 20 percent opacity except [401 KAR 59:015, Section 4(2)]:
  - 1. A maximum of 40 percent opacity shall be allowed for one 6-minute period in any 60 consecutive minutes [401 KAR 59:015, Section 4(2)(b)];

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

- 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. The sulfur dioxide emissions from each unit shall not exceed 2.71 lb/MMBtu [401 KAR 59:015, Section 5(1)(c)].

### Compliance Demonstration Method a through c:

Units are considered in compliance with the emission standards when burning 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 4].

#### 4. Specific Monitoring Requirements:

The permittee shall monitor the fuel combusted on a monthly basis [401 KAR 52:020 Section 10].

#### 5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the fuel combusted on a monthly basis [401 KAR 52:020 Section 10].
- b. 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)].

#### 6. Specific Reporting Requirements:

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

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#### **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. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and qualitative visible emission evaluation made. The results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause and any conservative actions taken for any abnormal visible emissions.

	Description	Generally Applicable Regulation
1.	Storage vessels containing petroleum or organic liquids with a capacity of less than 10,567 gallons, providing (a) the vapor pressure of the stored liquid is less than 1.5 psia at storage temperature, or (b) vessels greater than 580 gallons with stored liquids having greater than 1.5 psia vapor pressure are equipped with a permanent submerged fill pipe.	NA
2.	Storage vessels containing inorganic aqueous liquids, except inorganic acids with boiling points below the maximum storage temperature at atmospheric pressure.	NA
3.	Laboratory fume hoods and vents used exclusively for chemical or physical analysis, or for "bench scale production" R&D facilities.	NA
4.	Machinery lubricants and waxes, including oils, greases or other lubricants applied as temporary protective coatings.	NA
5.	#2 oil-fired space heaters or ovens rated at less than 2 million BTU per hour actual heat input provided the maximum sulfur content is less than 0.5% by weight.	NA
6.	Machining of metals, providing total solvent usage at the source for this activity does not exceed 60 gallons per month.	NA
7.	Water-related activities: demineralized water tanks; demineralizer vents; and pressure washing of equipment.	NA

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## **SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)**

	Description	Generally Applicable Regulation
8.	Combustion activities: portable electrical generators (that can be moved by hand); mobile sources; tobacco smoking rooms; kerosene heaters.	NA
9.	Ventilation and vents: plumbing traps, air compressor vents.	NA
10.	Maintenance and repair: unpaved roads; painting; brazing, soldering, and welding; portable blast-cleaning equipment; blast-cleaning equipment using water; non-asbestos insulation installation/removal; instrument air dryer and filter maintenance; roof repair.	401 KAR 63:010
11.	Use of hand-held equipment: cutting, drilling, grinding.	NA
12.	Housekeeping activities: steam cleaning; restroom cleaning.	NA
13.	Office activities: photocopying, office supplies	NA
14.	Natural gas piping	NA
15.	Fugitive emissions related to movement of passenger vehicles.	401 KAR 63:010
16.	Soil borrow pits.	NA
17.	Manual loading and unloading operations.	NA
18.	Construction and demolition activities.	401 KAR 63:010

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## 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 12 consecutive months.
- 2. Nitrogen oxide, sulfur dioxide, carbon monoxide, particulate matter, volatile organic compound, beryllium, sulfuric acid mist, cadmium, chromium, formaldehyde, mercury, lead, nickel, manganese emissions and sulfur content 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. Pursuant to 401 KAR 51:017, emissions shall not exceed the following limits for Emission Units 1-4 combined in any consecutive 12 months:

Pollutant	<b>Emission Limit (tons)</b>		
Sulfur Dioxide	2,500		
Carbon Monoxide	375		
Particulate Matter	270		
VOC	130		
Beryllium	0.019		
Sulfuric Acid Mist	75		

To demonstrate compliance with sulfur dioxide, particulate matter, beryllium and sulfuric acid mist, the 12-month total for each unit shall be calculated monthly, then summed across all 4 units, and reported semi-annually. The permittee shall maintain onsite a log of each 12-month rolling total. To demonstrate compliance with carbon monoxide (CO), the 12-month total emissions for each unit shall be calculated monthly for Emission Unit 4 and determined based on CO CEMS data for Emission Units 1, 2 and 3. Then emissions shall be summed across all 4 units, and reported semi-annually. The permittee shall maintain onsite a log of each 12-month rolling total. Compliance with the CO limit shall demonstrated compliance with the VOC limit.

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### **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.

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# 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 10, 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 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 10].
- 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.

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# SECTION F – MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 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 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 6 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 10].
- 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 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 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 2 hours in excess of permit requirements, the report must be made within 48 hours.

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# SECTION F – MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 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.
  - 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 Blvd. 1<sup>st</sup> Floor Frankfort, KY 40601 U.S. EPA Region 4 Air Enforcement Branch Atlanta Federal Center 61 Forsyth St. 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.

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#### **SECTION G - GENERAL PROVISIONS**

#### 1. General Compliance Requirements

a. 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 10].

- 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 10].
- 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 3 years or longer. In this case, the reopening shall be completed no later than 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 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 10]

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### **SECTION G - GENERAL PROVISIONS (CONTINUED)**

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)].

- 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 10].
- 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 10].
- 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 10].
- 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 10].
- 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) 2.].
- 1. 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 10].
- 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) 4.].
- 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) 1.].

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### **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 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 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 10 days following the transfer.

#### 4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

No construction authorized by this permit (V-18-028).

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### **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 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 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 45 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 NO<sub>x</sub> 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;

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#### **SECTION G - GENERAL PROVISIONS (CONTINUED)**

- 2. The permitted facility was at the time being properly operated;
- 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.

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### **SECTION G - GENERAL PROVISIONS (CONTINUED)**

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*.

#### 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:

RMP Reporting Center P.O. Box 1515 Lanham-Seabrook, MD 20703-1515.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

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## **SECTION H – ALTERNATE OPERATING SCENARIOS**

NA

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## **SECTION I – COMPLIANCE SCHEDULE**

NA

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### SECTION J – ACID RAIN

#### **ACID RAIN PERMIT CONTENTS**

#### 1. Statement of Basis:

**Statutory and Regulatory Authorities:** The Energy and Environmental Cabinet, Division for Air Quality issues this permit pursuant to 401 KAR 52:020, Title V permits, 401 KAR 52:060, Acid rain permits, and 40 CFR 76 and in accordance to KRS 224.10-100 and Titles IV and V of the Clean Air Act.

### 2. SO<sub>2</sub> allowances allocated under this permit and NO<sub>X</sub> requirements for each affected unit.

Plant Name: J. K. Smith Generating Station, East Kentucky Power Cooperative, Inc.					
<b>Affected Units:</b> EU 01 (SCT 01) – EU 07 (SCT 07), EU 09-10 <sup>1</sup>					
SO <sub>2</sub> Allowances	Year				
	2019	2020	2021	2022	2023
Tables 2, 3 or 4 of 40 CFR Part 73	0	0	0	0	0
NO <sub>X</sub> Requirements					
NO <sub>X</sub> Limits N/A					

#### 3. Comments, Notes, and Justifications:

- a. The 9 combustion turbines, Emission Units 01-07 and 09-10 have no SO<sub>2</sub> allowances allocated by U.S. EPA.
- b. The 9 combustion turbines, Emission Units 01-07, 09-10 do not have applicable NO<sub>X</sub> limits set by 40 CFR Part 76.

#### 4. Permit Application:

The Acid Rain Permit Application and CAIR Permit Application are a part of this permit and the source must comply with the standard requirements and special provisions set forth in the applications.

There is no Emission Unit 8.

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## **SECTION J – ACID RAIN (CONTINUED)**

### 5. Summary of Actions:

a. Past Action:

Emission Units 11 and 12 were removed from the permit.

b. Present Action:

Renewal of Title V permit.

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### SECTION K – CLEAN AIR INTERSTATE RULE (CAIR)

#### 1. Statement of Basis

**Statutory and Regulatory Authorities:** In accordance with KRS 224.10-100, the Kentucky Energy and Environment Cabinet issues this permit pursuant to 401 KAR 52:020, Title V permits, 401 KAR 51:210, CAIR NO<sub>X</sub> Annual Trading Program, 401 KAR 51:220, CAIR NO<sub>X</sub> Ozone season trading program, and 401 KAR 51:230, CAIR SO<sub>2</sub> Trading Program.

### 2. CAIR Application

The CAIR application for 9 electrical generating units was submitted to the Division and received on January 31, 2011. Requirements contained in that application are hereby incorporated into and made part of this CAIR Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

# 3. <u>Comments, notes, justifications regarding permit decisions and changes made to the permit application forms during the review process, and any additional requirements or conditions.</u>

The affected units are 9 simple cycle combustion turbines (Emission Units 01-07, 09 and 10) used for electrical power production. Each unit has a nameplate capacity to generate greater than 25 megawatts of electricity, which is offered for sale. The combustion turbines use natural gas (at least 90 percent of the time) as a primary fuel source and Emission Units 01-07 use fuel oil (not more than 10 percent of the time) as a secondary source.

#### 4. Summary of Actions

The CAIR Permit is being re-issued in conjunction with the Title V permit.

A December 2008 court decision kept the requirements of CAIR in place temporarily but directed EPA to issue a new rule to implement Clean Air Act requirements concerning the transport of air pollution across state boundaries. On July 6, 2011, the U.S. EPA finalized the Cross-State Air Pollution Rule (CSAPR). On December 30, 2011, CSAPR was stayed prior to implementation. On April 29, 2014, the U.S. Supreme Court issued an opinion reversing an August 21, 2012 D.C. Circuit decision that had vacated CSAPR. Following the remand of the case to the D.C. Circuit, EPA requested that the court lift the CSAPR stay and toll the CSAPR compliance deadlines by 3 years. On October 23, 2014, the D.C. Circuit granted EPA's request. CSAPR implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

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### SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR)

#### **Description of CSAPR Monitoring Provisions**

The CSAPR subject units, and the unit-specific monitoring provisions at this source, are identified in the following tables. These units are subject to the requirements for the CSAPR NO<sub>X</sub> Annual Trading Program, CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program, and CSAPR SO<sub>2</sub> Group 1 Trading Program

Parameter	emission monitoring system or systems (CEMS) requirements pursuant to 40	gas- and oil-fired units pursuant to 40 CFR part 75, appendix D	Excepted monitoring system requirements for gas- and oil-fired peaking units pursuant to 40 CFR part 75, appendix E	Emissions excepted monitoring (LME) requirements for gas- and oil-fired	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, Subpart E
$SO_2$		X			
NO <sub>X</sub>	X				
Heat input		X			

- 1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(30) (CSAPR NOx Annual Trading Program), 401 KAR 51:250 Section 3(25) through 401 KAR 51:250, Section 3(30) (CSAPR NOx Ozone Season Group 2 Trading Program), and 401 KAR 51:260 Section 3(25) through 401 KAR 51:260, Section 3(30) (CSAPR SO<sub>2</sub> Group 1 Trading Program). The monitoring, recordkeeping, and reporting requirements applicable to each unit are included below in the standard conditions for the applicable CSAPR trading programs.
- 2. Owners and operators must submit to the Administrator a monitoring plan for each unit in accordance with 40 CFR 75.53, 75.62 and 75.73, as applicable. The monitoring plan for each unit is available at the EPA's website: <a href="http://www.epa.gov/airmarkets/emissions/monitoringplans.html">http://www.epa.gov/airmarkets/emissions/monitoringplans.html</a>.

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

3. Owners and operators that want to use an alternative monitoring system must submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR 75, Subpart E and 40 CFR 75.66 and 401 KAR 51:240, Section 3(30) (CSAPR NOx Annual Trading Program), 401 KAR 51:250, Section 3(30) (CSAPR NOx Ozone Season Group 2 Trading Program), and/or 401 KAR 51:260, Section 3(30) (CSAPR SO<sub>2</sub> Group 1 Trading Program). The Administrator's response approving or disapproving any petition for an alternative monitoring system is available on the EPA's website at:

http://www.epa.gov/airmarkets/emisisons/petitions.html.

- 4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirements under 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(29) (CSAPR NOx Annual Trading Program), 401 KAR 51:250, Section 3(25) through 401 KAR 51:250, Section 3(29) (CSAPR NOx Ozone Season Group 2 Trading Program), and/or 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(29) (CSAPR SO<sub>2</sub> Group 1 Trading Program) must submit to the Administrator a petition requesting approval of the alternative in accordance with 401 KAR 51:240, Section 3(30) (CSAPR NOx Annual Trading Program), 401 KAR 51:260, Section 3(30) (CSAPR SO<sub>2</sub> Group 1 Trading Program), or 401 KAR 51:250, Section 3(30) (CSAPR NOx Ozone Season Group 2 Trading Program). The Administrator's response approving or disapproving any petition for an alternative to a monitoring, recordkeeping, or reporting requirement is available on the EPA's website at <a href="http://www.epa.gov/airmarkets/emissions/petitions.html">http://www.epa.gov/airmarkets/emissions/petitions.html</a>.
- 5. The descriptions of monitoring applicable to the unit included above meet the requirement of 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(29) (CSAPR NOx Annual Trading Program), 401 KAR 51:250, Section 3(25) through 401 KAR 51:250, Section 3(29) (CSAPR NOx Ozone Season Group 2 Trading Program), and 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(29) (CSAPR SO<sub>2</sub> Group 1 Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B), may be used to add or change this unit's monitoring system description.

### CSAPR NO<sub>X</sub> Annual Trading Program requirements (401 KAR 51:240, Section 3(4))

#### a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 401 KAR 51:240, Section 3(10) through 401 KAR 51:240, Section 3(15).

#### b) Emissions monitoring, reporting, and recordkeeping requirements.

1. The owners and operators, and the designated representative, of each CSAPR NO<sub>X</sub> Annual source and each CSAPR NO<sub>X</sub> Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 401 KAR 51:240, Section 3(25) (general requirements, including installation, certification, and data accounting, compliance

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

deadlines, reporting data, prohibitions, and long-term cold storage), 401 KAR 51:240, Section 3(26) (initial monitoring system certification and recertification procedures), 401 KAR 51:240, Section 3(27) (monitoring system out-of-control periods), 401 KAR 51:240, Section 3(28) (notifications concerning monitoring), 401 KAR 51:240, Section 3(29) (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 401 KAR 51:240, Section 3(30) (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

2. The emissions data determined in accordance with 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(30) shall be used to calculate allocations of CSAPR NO<sub>X</sub> Annual allowances under 401 KAR 51:240, Section 3(8) (40 CFR 97.411(a)(2) and (b)) and 401 KAR 51:240, Section 3(9) and to determine compliance with the CSAPR NO<sub>X</sub> Annual emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(30) and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

#### c) NO<sub>x</sub> emissions requirements.

- 1. CSAPR NOx Annual emissions limitation.
  - i. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>X</sub> Annual source and each CSAPR NO<sub>X</sub> Annual unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>X</sub> Annual allowances available for deduction for such control period under 401 KAR 51:240, Section 3(20) (40 CFR 97.424(a)) in an amount not less than the tons of total NO<sub>X</sub> emissions for such control period from all CSAPR NO<sub>X</sub> Annual units at the source.
  - ii. If total NOx emissions during a control period in a given year from the CSAPR NOx Annual units at a CSAPR NOx Annual source are in excess of the CSAPR NOx Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - A) The owners and operators of the source and each CSAPR NO<sub>X</sub> Annual unit at the source shall hold the CSAPR NO<sub>X</sub> Annual allowances required for deduction under 401 KAR 51:240, Section 3(20) (40 CFR 97.424(d)); and
    - B) The owners and operators of the source and each CSAPR NO<sub>X</sub> Annual unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 401 KAR 51:240 and the Clean Air Act.
- 2. CSAPR NO<sub>x</sub> Annual assurance provisions.

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

- i. If total NO<sub>X</sub> emissions during a control period in a given year from all CSAPR NO<sub>X</sub> Annual units at CSAPR NOx Annual sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>X</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO<sub>X</sub> Annual allowances available for deduction for such control period under 401 KAR 51:240, Section 3(21) (40 CFR 97.425(a)) in an amount equal to 2 times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 401 KAR 51:240, Section 3(21) (40 CFR 97.425(b)), of multiplying—(A) The quotient of the amount by which the common designated representative's share of such NOx emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NOx emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO<sub>X</sub> emissions from all CSAPR NO<sub>X</sub> Annual units at CSAPR NO<sub>X</sub> Annual sources in the state for such control period exceed the state assurance level.
- ii. The owners and operators shall hold the CSAPR NO<sub>X</sub> Annual allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
- iii. Total NO<sub>X</sub> emissions from all CSAPR NO<sub>X</sub> Annual units at CSAPR NO<sub>X</sub> Annual sources in the State during a control period in a given year exceed the state assurance level if such total NO<sub>X</sub> emissions exceed the sum, for such control period, of the state NO<sub>X</sub> Annual trading budget under 401 KAR 51:240, Section 3(7)(a)(1) and the state's variability limit under 401 KAR 51:240, Section 3(7)(a)(3).
- iv. It shall not be a violation of 401 KAR 51:240, or of the Clean Air Act if total NO<sub>X</sub> emissions from all CSAPR NO<sub>X</sub> Annual units at CSAPR NO<sub>X</sub> Annual sources in the State during a control period exceed the state assurance level or if a common designated representative's share of total NO<sub>X</sub> emissions from the CSAPR NO<sub>X</sub> Annual units at CSAPR NO<sub>X</sub> Annual sources in the state during a control period exceeds the common designated representative's assurance level.
- v. To the extent the owners and operators fail to hold CSAPR NO<sub>x</sub> Annual allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above.

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and

B) Each CSAPR NO<sub>x</sub> Annual allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 401 KAR 51:240, and the Clean Air Act.

### 3. Compliance periods.

- i. A CSAPR NO<sub>x</sub> Annual unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015, or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:240, Section 3(25) (40 CFR 97.430(b)) and for each control period thereafter.
- ii. A CSAPR NO<sub>X</sub> Annual unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:240, Section 3(25) (40 CFR 97.430(b)) and for each control period thereafter.
- 4. Vintage of allowances held for compliance.
  - i. A CSAPR NOx Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year shall be a CSAPR NOx Annual allowance that was allocated for such control period or a control period in a prior year.
  - ii. A CSAPR NO<sub>x</sub> Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year shall be a CSAPR NO<sub>x</sub> Annual allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- 5. Allowance Management System requirements. Each CSAPR NO<sub>X</sub> Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 401 KAR 51:240.
- 6. Limited authorization. A CSAPR NO<sub>X</sub> Annual allowance is a limited authorization to emit 1 ton of NO<sub>X</sub> during the control period in 1 year. Such authorization is limited in its use and duration as follows:
  - i. Such authorization shall only be used in accordance with the CSAPR NO<sub>X</sub> Annual Trading Program; and

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

ii. Notwithstanding any other provision of 40 CFR 97, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.

7. Property right. A CSAPR NO<sub>X</sub> Annual allowance does not constitute a property right.

### d) Title V permit revision requirements.

- 1. No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO<sub>x</sub> Annual allowances in accordance with 401 KAR 51:240.
- 2. This permit incorporates the CSAPR emissions monitoring, recordkeeping, and reporting requirements pursuant to 401 KAR 51:240, Section 3(25) through 401 KAR 51:240, Section 3(30), and the requirements for a continuous emission monitoring system (pursuant to 40 CFR 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR 75, Subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with 401 KAR 51:240, Section 3(4) (40 CFR 97.406(d)(2)) and 70.7(e)(2)(i)(B).

#### e) Additional recordkeeping and reporting requirements.

- 1. Unless otherwise provided, the owners and operators of each CSAPR NO<sub>X</sub> Annual source and each CSAPR NO<sub>X</sub> Annual unit at the source shall maintain on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - i. The certificate of representation under 401 KAR 51:240, Section 3(13) for the designated representative for the source and each CSAPR NO<sub>X</sub> Annual unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 401 KAR 51:240, Section 3(13) changing the designated representative.
  - ii. All emissions monitoring information, in accordance with 401 KAR 51:240.
  - iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO<sub>X</sub> Annual Trading Program.

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

2. The designated representative of a CSAPR NOx Annual source and each CSAPR NOx Annual unit at the source shall make all submissions required under the CSAPR NOx Annual Trading Program, except as provided in 401 KAR 51:240, Section 3(15). This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR 70.

### f) Liability.

- 1. Any provision of the CSAPR NO<sub>X</sub> Annual Trading Program that applies to a CSAPR NO<sub>X</sub> Annual source or the designated representative of a CSAPR NO<sub>X</sub> Annual source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>X</sub> Annual units at the source.
- 2. Any provision of the CSAPR NO<sub>X</sub> Annual Trading Program that applies to a CSAPR NO<sub>X</sub> Annual unit or the designated representative of a CSAPR NO<sub>X</sub> Annual unit shall also apply to the owners and operators of such unit.

#### g) Effect on other authorities.

No provision of the CSAPR NO<sub>X</sub> Annual Trading Program or exemption under 401 KAR 51:240, Section 3(3) shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO<sub>X</sub> Annual source or CSAPR NO<sub>X</sub> Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

## <u>CSAPR NO<sub>x</sub> Ozone Season Group 2 Trading Program Requirements (401 KAR 51:250, Section 3(4))</u>

### a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 401 KAR 51:250, Section 3(10) through 401 KAR 51:250, Section 3(15).

#### b) Emissions monitoring, reporting, and recordkeeping requirements.

1. The owners and operators, and the designated representative, of each CSAPR NOx Ozone Season Group 2 source and each CSAPR NOx Ozone Season Group 2 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 401 KAR 51:250, Section 3(25) (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 401 KAR 51:250, Section 3(26) (initial monitoring system certification and recertification procedures), 401 KAR 51:250, Section 3(28) (notifications concerning monitoring), 401 KAR 51:250, Section 3(29) (recordkeeping and reporting, including monitoring plans,

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

certification applications, quarterly reports, and compliance certification), and 401 KAR 51:250, Section 3(30) (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

2. The emissions data determined in accordance with 401 KAR 51:250, Section 3(25) through 401 KAR 51:250, Section 3(30) shall be used to calculate allocations of CSAPR NO<sub>X</sub> Ozone Season Group 2 allowances under 401 KAR 51:250, Section 3(8) (40 CFR 97.811(a)(2) and (b)) and 401 KAR 51:250, Section 3(9) (40 CFR 97.812) and to determine compliance with the CSAPR NO<sub>X</sub> Ozone Season Group 2 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 401 KAR 51:250, Section 3(25) through 401 KAR 51:250, Section 3(30) and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

### c) NO<sub>x</sub> emissions requirements.

- 1. CSAPR NO<sub>X</sub> Ozone Season Group 2 emissions limitation.
  - i. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR NO<sub>X</sub> Ozone Season Group 2 source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO<sub>X</sub> Ozone Season Group 2 allowances available for deduction for such control period under 401 KAR 51:250, Section 3(20) (40 CFR 97.824(a)) in an amount not less than the tons of total NO<sub>X</sub> emissions for such control period from all CSAPR NO<sub>X</sub> Ozone Season Group 2 units at the source.
  - ii. If total NO<sub>X</sub> emissions during a control period in a given year from the CSAPR NO<sub>X</sub> Ozone Season Group 2 units at a CSAPR NO<sub>X</sub> Ozone Season Group 2 source are in excess of the CSAPR NO<sub>X</sub> Ozone Season Group 2 emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - A) The owners and operators of the source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source shall hold the CSAPR NO<sub>X</sub> Ozone Season Group 2 allowances required for deduction under 401 KAR 51:250, Section 3(20) (40 CFR 97.824(d)); and
    - B) The owners and operators of the source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such excess emissions and each day of such control period shall constitute a separate violation of 401 KAR 51:250, and the Clean Air Act.
- 2. CSAPR NO<sub>X</sub> Ozone Season Group 2 assurance provisions.

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

- i. If total NO<sub>x</sub> emissions during a control period in a given year from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such NO<sub>x</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR NO<sub>x</sub> Ozone Season Group 2 allowances available for deduction for such control period under 401 KAR 51:250, Section 3(21) (40 CFR 97.825(a)) in an amount equal to 2 times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 401 KAR 51:250, Section 3(21) (40 CFR 97.825(b)), of multiplying—
  - A) The quotient of the amount by which the common designated representative's share of such NO<sub>X</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such NO<sub>X</sub> emissions exceeds the respective common designated representative's assurance level; and
  - B) The amount by which total NO<sub>X</sub> emissions from all CSAPR NO<sub>X</sub> Ozone Season Group 2 units at CSAPR NO<sub>X</sub> Ozone Season Group 2 sources in the state for such control period exceed the state assurance level.
- ii. The owners and operators shall hold the CSAPR NO<sub>X</sub> Ozone Season Group 2 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
- iii. Total NO<sub>x</sub> emissions from all CSAPR NO<sub>x</sub> Ozone Season Group 2 units at CSAPR NO<sub>x</sub> Ozone Season Group 2 sources in the state during a control period in a given year exceed the state assurance level if such total NO<sub>x</sub> emissions exceed the sum, for such control period, of the State NO<sub>x</sub> Ozone Season Group 2 trading budget under 401 KAR 51:250, Section 3(7)(a)(1) (40 CFR 97.810(a)) and the state's variability limit under 401 KAR 51:250, Section 3(7)(a)(3) (40 CFR 97.810(b)).
- iv. It shall not be a violation of 401 KAR 51:250, or of the Clean Air Act if total NOx emissions from all CSAPR NOx Ozone Season Group 2 units at CSAPR NOx Ozone Season Group 2 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total NOx emissions from the CSAPR NOx Ozone Season Group 2 units at CSAPR NOx Ozone Season Group 2 sources in the state during a control period exceeds the common designated representative's assurance level.

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

v. To the extent the owners and operators fail to hold CSAPR NOx Ozone Season Group 2 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,

- A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
- B) Each CSAPR NO<sub>X</sub> Ozone Season Group 2 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 401 KAR 51:250, and the Clean Air Act.

### 3. Compliance periods.

- i. A CSAPR NOx Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:250, Section 3(25) (40 CFR 97.830(b)) and for each control period thereafter.
- ii. A CSAPR NO<sub>X</sub> Ozone Season Group 2 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:250, Section 3(25) (40 CFR 97.830(b)) and for each control period thereafter.
- 4. Vintage of allowances held for compliance.
  - i. A CSAPR NO<sub>X</sub> Ozone Season Group 2 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year shall be a CSAPR NO<sub>X</sub> Ozone Season Group 2 allowance that was allocated for such control period or a control period in a prior year.
  - ii. A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year shall be a CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- 5. Allowance Management System requirements. Each CSAPR NO<sub>X</sub> Ozone Season Group 2 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 401 KAR 51:250.
- 6. Limited authorization. A CSAPR NO<sub>X</sub> Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO<sub>X</sub> during the control period in 1 year. Such authorization is limited in its use and duration as follows:

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

i. Such authorization shall only be used in accordance with the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program; and

- ii. Notwithstanding any other provision of 401 KAR 51:250, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- 7. Property right. A CSAPR NO<sub>x</sub> Ozone Season Group 2 allowance does not constitute a property right.

### d) Title V permit revision requirements.

- 1. No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO<sub>X</sub> Ozone Season Group 2 allowances in accordance with 401 KAR 51:250.
- 2. This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 401 KAR 51:250, Section 3(25) through 401 KAR 51:250, Section 3(30), and the requirements for a continuous emission monitoring system (pursuant to 40 CFR 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR 75, Subpart E). Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with401 KAR 51:250, Section 3(4) (40 CFR 97.806(d)(2)) and 70.7(e)(2)(i)(B).

#### e) Additional recordkeeping and reporting requirements.

- 1. Unless otherwise provided, the owners and operators of each CSAPR NO<sub>X</sub> Ozone Season Group 2 source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source shall maintain on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - i. The certificate of representation under 401 KAR 51:250, Section 3(13) for the designated representative for the source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of representation under 401 KAR 51:250, Section 3(13) changing the designated representative.

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

ii. All emissions monitoring information, in accordance with 401 KAR 51:250.

- iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program.
- 2. The designated representative of a CSAPR NO<sub>X</sub> Ozone Season Group 2 source and each CSAPR NO<sub>X</sub> Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program, except as provided in 401 KAR 51:250, Section 3(15). This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR 70.

### f) Liability.

- 1. Any provision of the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>X</sub> Ozone Season Group 2 source or the designated representative of a CSAPR NO<sub>X</sub> Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO<sub>X</sub> Ozone Season Group 2 units at the source.
- 2. Any provision of the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program that applies to a CSAPR NO<sub>X</sub> Ozone Season Group 2 unit or the designated representative of a CSAPR NO<sub>X</sub> Ozone Season Group 2 unit shall also apply to the owners and operators of such unit.

#### g) Effect on other authorities.

No provision of the CSAPR NO<sub>X</sub> Ozone Season Group 2 Trading Program or exemption under 401 KAR 51:250, Section 3(3) shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO<sub>X</sub> Ozone Season Group 2 source or CSAPR NO<sub>X</sub> Ozone Season Group 2 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

#### CSAPR SO<sub>2</sub> Group 1 Trading Program requirements (401 KAR 51:260, Section 3(4))

### a) Designated representative requirements.

The owners and operators shall comply with the requirement to have a designated representative, and may have an alternate designated representative, in accordance with 401 KAR 51:260, Section 3(10) through 401 KAR 51:260, Section 3(15).

#### b) Emissions monitoring, reporting, and recordkeeping requirements.

1. The owners and operators, and the designated representative, of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall comply with the monitoring,

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

reporting, and recordkeeping requirements of 401 KAR 51:260, Section 3(25) (general requirements, including installation, certification, and data accounting, compliance deadlines, reporting data, prohibitions, and long-term cold storage), 401 KAR 51:260, Section 3(26) (initial monitoring system certification and recertification procedures), 401 KAR 51:260, Section 3(27) (monitoring system out-of-control periods), 401 KAR 51:260, Section 3(28) (notifications concerning monitoring), 401 KAR 51:260, Section 3(29) (recordkeeping and reporting, including monitoring plans, certification applications, quarterly reports, and compliance certification), and 401 KAR 51:260, Section 3(30) (petitions for alternatives to monitoring, recordkeeping, or reporting requirements).

2. The emissions data determined in accordance with 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(30) shall be used to calculate allocations of CSAPR SO<sub>2</sub> Group 1 allowances under 401 KAR 51:260, Section 3(8) (40 CFR 97.611(a)(2)) and (b)) and 401 KAR 51:260, Section 3(9) and to determine compliance with the CSAPR SO<sub>2</sub> Group 1 emissions limitation and assurance provisions under paragraph (c) below, provided that, for each monitoring location from which mass emissions are reported, the mass emissions amount used in calculating such allocations and determining such compliance shall be the mass emissions amount for the monitoring location determined in accordance with 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(30) and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

#### c) SO<sub>2</sub> emissions requirements.

- 1. CSAPR SO<sub>2</sub> Group 1 emissions limitation.
  - i. As of the allowance transfer deadline for a control period in a given year, the owners and operators of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 401 KAR 51:260, Section 3(20) (40 CFR 97.624(a)) in an amount not less than the tons of total SO<sub>2</sub> emissions for such control period from all CSAPR SO<sub>2</sub> Group 1 units at the source.
  - ii. If total SO<sub>2</sub> emissions during a control period in a given year from the CSAPR SO<sub>2</sub> Group 1 units at a CSAPR SO<sub>2</sub> Group 1 source are in excess of the CSAPR SO<sub>2</sub> Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
    - A) The owners and operators of the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall hold the CSAPR SO<sub>2</sub> Group 1 allowances required for deduction under 401 KAR 51:260, Section 3(20) (40 CFR 97.624(d)); and
    - B) The owners and operators of the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall pay any fine, penalty, or assessment or comply with any other remedy imposed, for the same violations, under the Clean Air Act, and each ton of such

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

excess emissions and each day of such control period shall constitute a separate violation 401 KAR 51:260, and the Clean Air Act.

#### 2. CSAPR SO<sub>2</sub> Group 1 assurance provisions.

- i. If total SO<sub>2</sub> emissions during a control period in a given year from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in the state exceed the state assurance level, then the owners and operators of such sources and units in each group of one or more sources and units having a common designated representative for such control period, where the common designated representative's share of such SO<sub>2</sub> emissions during such control period exceeds the common designated representative's assurance level for the state and such control period, shall hold (in the assurance account established for the owners and operators of such group) CSAPR SO<sub>2</sub> Group 1 allowances available for deduction for such control period under 401 KAR 51:260, Section 3(21) (40 CFR 97.625(a)) in an amount equal to 2 times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 401 KAR 51:260, Section 3(21) (40 CFR 97.625(b)), of multiplying—
  - A) The quotient of the amount by which the common designated representative's share of such SO<sub>2</sub> emissions exceeds the common designated representative's assurance level divided by the sum of the amounts, determined for all common designated representatives for such sources and units in the state for such control period, by which each common designated representative's share of such SO<sub>2</sub> emissions exceeds the respective common designated representative's assurance level; and
  - B) The amount by which total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in the state for such control period exceed the state assurance level.
- ii. The owners and operators shall hold the CSAPR SO<sub>2</sub> Group 1 allowances required under paragraph (c)(2)(i) above, as of midnight of November 1 (if it is a business day), or midnight of the first business day thereafter (if November 1 is not a business day), immediately after such control period.
- iii. Total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO<sub>2</sub> emissions exceed the sum, for such control period, of the state SO<sub>2</sub> Group 1 trading budget under 401 KAR 51:260, Section 3(7)(a)(1) and the state's variability limit under 401 KAR 51:260, Section 3(7)(a)(3).
- iv. It shall not be a violation of 401 KAR 51:260, or of the Clean Air Act if total SO<sub>2</sub> emissions from all CSAPR SO<sub>2</sub> Group 1 units at CSAPR SO<sub>2</sub> Group 1 sources in the state during a control period exceed the state assurance level or if a common designated representative's share of total SO<sub>2</sub> emissions from the CSAPR SO<sub>2</sub> Group 1 units at

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

CSAPR SO<sub>2</sub> Group 1 sources in the state during a control period exceeds the common designated representative's assurance level.

- v. To the extent the owners and operators fail to hold CSAPR SO<sub>2</sub> Group 1 allowances for a control period in a given year in accordance with paragraphs (c)(2)(i) through (iii) above,
  - A) The owners and operators shall pay any fine, penalty, or assessment or comply with any other remedy imposed under the Clean Air Act; and
  - B) Each CSAPR SO<sub>2</sub> Group 1 allowance that the owners and operators fail to hold for such control period in accordance with paragraphs (c)(2)(i) through (iii) above and each day of such control period shall constitute a separate violation of 401 KAR 51:260, and the Clean Air Act.

### 3. Compliance periods.

- i. A CSAPR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of January 1, 2015 or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:260, Section 3(25) (40 CFR 97.630(b)) and for each control period thereafter.
- ii. A CSAPR SO<sub>2</sub> Group 1 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of January 1, 2017 or the deadline for meeting the unit's monitor certification requirements under 401 KAR 51:260, Section 3(25) (40 CFR 97.630(b)) and for each control period thereafter.
- 4. Vintage of allowances held for compliance.
  - i. A CSAPR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year shall be a CSAPR SO<sub>2</sub> Group 1 allowance that was allocated for such control period or a control period in a prior year.
  - ii. A CSAPR SO<sub>2</sub> Group 1 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (2)(i) through (iii) above for a control period in a given year shall be a CSAPR SO<sub>2</sub> Group 1 allowance that was allocated for a control period in a prior year or the control period in the given year or in the immediately following year.
- 5. Allowance Management System requirements. Each CSAPR SO<sub>2</sub> Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 401 KAR 51:260.

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## SECTION L - CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

6. Limited authorization. CSAPR SO<sub>2</sub> Group 1 allowance is a limited authorization to emit 1 ton of SO<sub>2</sub> during the control period in 1 year. Such authorization is limited in its use and duration as follows:

- i. Such authorization shall only be used in accordance with the CSAPR SO<sub>2</sub> Group 1 Trading Program; and
- ii. Notwithstanding any other provision of 401 KAR 51:260, the Administrator has the authority to terminate or limit the use and duration of such authorization to the extent the Administrator determines is necessary or appropriate to implement any provision of the Clean Air Act.
- 7. Property right. CSAPR SO<sub>2</sub> Group 1 allowance does not constitute a property right.

### d) Title V permit revision requirements.

- 1. No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO<sub>2</sub> Group 1 allowances in accordance with 401 KAR 51:260.
- 2. This permit incorporates the CSAPR emissions monitoring, recordkeeping and reporting requirements pursuant to 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(30), and the requirements for a continuous emission monitoring system (pursuant to 40 CFR 75, Subparts B and H), an excepted monitoring system (pursuant to 40 CFR 75, Appendices D and E), a low mass emissions excepted monitoring methodology (pursuant to 40 CFR 75.19), and an alternative monitoring system (pursuant to 40 CFR 75, Subpart E), Therefore, the Description of CSAPR Monitoring Provisions table for units identified in this permit may be added to, or changed, in this Title V permit using minor permit modification procedures in accordance with 401 KAR 51:260, Section 3(4) (40 CFR 97.606(d)(2)) and 70.7(e)(2)(i)(B).

### e) Additional recordkeeping and reporting requirements.

- 1. Unless otherwise provided, the owners and operators of each CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall maintain on site at the source each of the following documents (in hardcopy or electronic format) for a period of 5 years from the date the document is created. This period may be extended for cause, at any time before the end of 5 years, in writing by the Administrator.
  - i. The certificate of representation under 401 KAR 51:260, Section 3(13) for the designated representative for the source and each CSAPR SO<sub>2</sub> Group 1 unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such certificate of representation and documents are superseded because of the submission of a new certificate of

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# SECTION L – CROSS STATE AIR POLLUTION RULE (CSAPR) (CONTINUED)

representation under 401 KAR 51:260, Section 3(13) changing the designated representative.

- ii. All emissions monitoring information, in accordance with 401 KAR 51:260.
- iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under, or to demonstrate compliance with the requirements of, the CSAPR SO<sub>2</sub> Group 1 Trading Program.
- 2. The designated representative of a CSAPR SO<sub>2</sub> Group 1 source and each CSAPR SO<sub>2</sub> Group 1 unit at the source shall make all submissions required under the CSAPR SO<sub>2</sub> Group 1 Trading Program, except as provided in 401 KAR 51:260, Section 3(15). This requirement does not change, create an exemption from, or otherwise affect the responsible official submission requirements under a Title V operating permit program in 40 CFR 70.

#### f) Liability.

- 1. Any provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program that applies to a CSAPR SO<sub>2</sub> Group 1 source or the designated representative of a CSAPR SO<sub>2</sub> Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO<sub>2</sub> Group 1 units at the source.
- 2. Any provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program that applies to a CSAPR SO<sub>2</sub> Group 1 unit or the designated representative of a CSAPR SO<sub>2</sub> Group 1 unit shall also apply to the owners and operators of such unit.

#### g) Effect on other authorities.

No provision of the CSAPR SO<sub>2</sub> Group 1 Trading Program or exemption under 401 KAR 51:260, Section 3(3) shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO<sub>2</sub> Group 1 source or CSAPR SO<sub>2</sub> Group 1 unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.