Appendix G

Kentucky Reasonable Progress Assessments

G-1	KY DAQ Letter to Tennessee Valley Authority, July 15, 2020
G-2	KY DAQ Letter to Big Rivers Electric Corporation, July 15, 2020
G-3	KY DAQ Letter to TVA Request to Reduce SO ₂ Emissions at Shawnee, February 14, 2023
G-4	TVA Letter to KY DAQ Response to Request to Reduce SO ₂ Emissions at Shawnee, August 14, 2023
G-5	Owensboro Municipal Utilities – Elmer Smith Closure Letter, August 12, 2020
G-6	Big Rivers Electric Corporation – D.B. Wilson Permit
G-7	TVA - Shawnee Draft Permit

Appendix G-1

KY DAQ Letter to Tennessee Valley Authority July 21, 2020



REBECCA W. GOODMAN Secretary

ANTHONY R. HATTON COMMISSIONER

ENERGY AND ENVIRONMENT CABINET DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard FRANKFORT, KENTUCKY 40601 Telephone: 502-564-2150 Telefax: 502-564-4245

July 21, 2020

Mr. Jack Byars 1101 Market Street, BR 2C-C Chattanooga, TN 37402-2801

Re: Request for Regional Haze 4-Factor Analysis for TVA – Shawnee impacting the Mammoth Cave Class I Area

Dear Mr. Byars:

Regional Haze Regulation 40 CFR § 51.308 requires each state to "address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State which may be affected by emissions from within the State." 40 § CFR 51.308(f) requires that states must submit a regional haze implementation plan revision by July 31, 2021. As part of the plan revision, a reasonable progress goal must be established to work towards achieving natural visibility conditions for the one Class I area, Mammoth Cave National Park, located within Kentucky. The goal "must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period."

In establishing reasonable progress goals, the State must consider the four factors specified in § 169A of the Federal Clean Air Act and in 40 CFR § 51.308(f)(2)(i):

- (1) the cost of compliance,
- (2) the time necessary for compliance,
- (3) the energy and non-air quality environmental impacts of compliance, and
- (4) the remaining useful life of any potentially affected sources.

To assist its member states, the Visibility Improvement State and Tribal Association of the Southeast¹ (VISTAS) and its contractors conducted technical analyses to help states identify facilities that significantly impact visibility impairment for Class I areas within and outside of the VISTAS region. VISTAS initially used an Area of Influence (AoI) analysis to identify the areas and sources most likely contributing to poor visibility in Class I areas. This AoI analysis

ANDY BESHEAR GOVERNOR

¹ VISTAS states include Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Mr. Jack Byars July 21, 2020 Page 2

involved running the HYSPLIT Trajectory Model to determine the origin of the air parcels affecting visibility. This information was then spatially combined with emissions data to determine the pollutants, sectors, and individual sources that are most likely contributing to the visibility impairment at each Class I area. VISTAS used this information to determine that the pollutants and sector with the largest impact on visibility impairment were sulfur dioxide and nitrogen oxides from point sources.

VISTAS states used the results of the AoI analysis to identify sources to "tag" for PM (Particulate Matter) Source Apportionment Technology (PSAT) modeling. PSAT modeling uses "reactive tracers" to apportion particulate matter among different sources, source categories, and regions. PSAT was implemented with the CAMx (Comprehensive Air Quality Model with extensions) photochemical model to determine visibility impairment due to individual facilities. PSAT results show that in 2028 the majority of visibility impairment at VISTAS Class I areas continues to be from point source SO₂ and NO_x emissions. Using the PSAT data, VISTAS states identified sources shown to have a sulfate or nitrate impact on one or more Class I areas that is greater than or equal to 1.00 percent of the total sulfate plus nitrate point source visibility impairment on the most impaired days for that Class I Federal area. This analysis identified TVA - Shawnee as one of those sources.

As previously discussed, during our call on April 16, 2020, TVA - Shawnee will need to complete a Four-Factor Analyses. The purpose of this letter is to formally request that you complete and return your findings from the Four-Factor analysis by <u>October 30, 2020</u>. The Division recommends the use of EPA's August 20, 2019 guidance to assist with the completion of the analysis (<u>https://www.epa.gov/sites/production/files/2019-08/documents/8-20-2019</u>_-regional haze guidance final guidance.pdf).

Thank you in advance for your assistance. Information collected will be shared with the other states/tribes within the Southeast and will be a part of the public record. If this information should be described as confidential, please contact the Division. We look forward to working with you further to improve Kentucky's air quality and meet our regional haze SIP submittal deadline as this process continues. If you have any questions, please contact Ms. Kelly Lewis, Program Planning Branch Manager, Division for Air Quality at (502) 782-6687 or Kelly.lewis@ky.gov.

Sincerely,

Melina Duff

Melissa Duff, Director Kentucky Division for Air Quality Signed by: Melissa Duff

Appendix G-2

KY DAQ Letter to Big Rivers Electric Corporation July 21, 2020



REBECCA W. GOODMAN Secretary

ANTHONY R. HATTON COMMISSIONER

ENERGY AND ENVIRONMENT CABINET DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard FRANKFORT, KENTUCKY 40601 Telephone: 502-564-2150 Telefax: 502-564-4245

July 21, 2020

Mr. Mark Bertram PO Box 24 Henderson, KY 42419

Re: Request for Regional Haze 4-Factor Analysis for Big Rivers – Wilson impacting the Mammoth Cave Class I Area

Dear Mr. Bertram:

Regional Haze Regulation 40 CFR § 51.308 requires each state to "address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State which may be affected by emissions from within the State." 40 § CFR 51.308(f) requires that states must submit a regional haze implementation plan revision by July 31, 2021. As part of the plan revision, a reasonable progress goal must be established to work towards achieving natural visibility conditions for the one Class I area, Mammoth Cave National Park, located within Kentucky. The goal "must provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period."

In establishing reasonable progress goals, the State must consider the four factors specified in § 169A of the Federal Clean Air Act and in 40 CFR § 51.308(f)(2)(i):

- (1) the cost of compliance,
- (2) the time necessary for compliance,
- (3) the energy and non-air quality environmental impacts of compliance, and
- (4) the remaining useful life of any potentially affected sources.

To assist its member states, the Visibility Improvement State and Tribal Association of the Southeast¹ (VISTAS) and its contractors conducted technical analyses to help states identify facilities that significantly impact visibility impairment for Class I areas within and outside of the VISTAS region. VISTAS initially used an Area of Influence (AoI) analysis to identify the areas and sources most likely contributing to poor visibility in Class I areas. This AoI analysis involved running the HYSPLIT Trajectory Model to determine the origin of the air parcels

ANDY BESHEAR GOVERNOR

¹ VISTAS states include Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia.

Mr. Mark Bertram July 21, 2020 Page 2

affecting visibility. This information was then spatially combined with emissions data to determine the pollutants, sectors, and individual sources that are most likely contributing to the visibility impairment at each Class I area. VISTAS then used this information to determine that the pollutants and sector with the largest impact on visibility impairment were sulfur dioxide and nitrogen oxides from point sources.

VISTAS states used the results of the AoI analysis to identify sources to "tag" for PM (Particulate Matter) Source Apportionment Technology (PSAT) modeling. PSAT modeling uses "reactive tracers" to apportion particulate matter among different sources, source categories, and regions. PSAT was implemented with the CAMx (Comprehensive Air Quality Model with extensions) photochemical model to determine visibility impairment due to individual facilities. PSAT results show that in 2028 the majority of visibility impairment at VISTAS Class I areas continues to be from point source SO₂ and NO_x emissions. Using the PSAT data, VISTAS states identified sources shown to have a sulfate or nitrate impact on one or more Class I areas that is greater than or equal to 1.00 percent of the total sulfate plus nitrate point source visibility impairment on the most impaired days for that Class I Federal area. This analysis identified Big Rivers – Wilson as one of these sources.

As previously discussed, during our call on April 16, 2020, Big Rivers – Wilson will need to complete a Four-Factor Analyses. The purpose of this letter is to formally request that you complete and return your findings from the Four-Factor analysis by October 30, 2020. The Division recommends the use of EPA's August 20, 2019 guidance to assist with the completion of the analysis (<u>https://www.epa.gov/sites/production/files/2019-08/documents/8-20-2019_</u>-regional haze guidance final guidance.pdf).

Thank you in advance for your assistance. Information collected will be shared with the other states/tribes within the Southeast and will be a part of the public record. If this information should be described as confidential, please contact the Division. We look forward to working with you further to improve Kentucky's air quality and meet our regional haze SIP submittal deadline as this process continues. If you have any questions, please contact Ms. Kelly Lewis, Program Planning Branch Manager, Division for Air Quality at (502) 782-6687 or Kelly.lewis@ky.gov.

Sincerely,

Melina Duff

Melissa Duff, Director Kentucky Division for Air Quality Signed by: Melissa Duff

Appendix G-3

KY DAQ Letter to TVA

Request to Reduce SO₂ Emissions at Shawnee February 14, 2023



Andy Beshear

ENERGY AND ENVIRONMENT CABINET

DEPARTMENT FOR ENVIRONMENTAL PROTECTION

300 Sower Boulevard Frankfort, Kentucky 40601 Phone: (502) 564-2150 Fax: 502-564-4245

February 14, 2023

Shannon Benton Shawnee Fossil Plant Manager Tennessee Valley Authority 7900 Metropolis Lake Road West Paducah KY 42086-9450

Re: Request for TVA to Reduce SO₂ Emissions at the Shawnee Facility to Decrease the Impact on Class I Areas as Required by the Regional Haze Rule

Dear Mr. Benton:

Regional Haze Regulation 40 CFR § 51.308 requires each state to "address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State which may be affected by emissions from within the State." A technical analysis conducted by the Visibility Improvement State and Tribal Association of the Southeast (VISTAS) and its contractors identified the Tennessee Valley Authority (TVA) – Shawnee Plant as significantly impacting (sulfate contributions of at least 1.00%) 16 Class I areas.

On July 21, 2020, the Division for Air Quality (Division) sent a letter requesting TVA perform a four-factor analysis to assess potential emission control options that could be used to attain reasonable progress toward the state's visibility goals. After review of the four-factor analysis report provided by Trinity Consultants (February 19, 2021), the Division determines that SO₂ emissions reductions at the Shawnee Plant are not only necessary, but achievable. The Division submits the following options for TVA to implement to reduce the Shawnee Plant's significant impact on the 16 Class I areas. TVA will immediately incorporate into the Shawnee Plant's Title V permit, either:

- an emissions limit of 8,208 tons per year of SO₂, based on a 12-month rolling total, effective January 1, 2028; or
- install and operate a Flue Gas Desulfurization Unit (FGD) on the seven uncontrolled units (2-3 and 5-9), effective no later than January 1, 2028.

On August 30, 2022, the Environmental Protection Agency (EPA) published a final action finding that 15 states, including Kentucky, failed to submit Regional Haze SIPs by the July 31, 2021 deadline. This action sets an aggressive 2-year timeline for Kentucky to submit a Regional Haze SIP before EPA implements a Federal Improvement Plan (FIP). Therefore, the Division requests TVA



Anthony R. Hatton

Mr. Shannon Benton Page 2 February 14, 2023

provide an application by <u>August 14, 2023</u>, to revise the Shawnee Plant's Title V permit to either implement a limit or install FGD units to reduce SO_2 emissions.

Thank you in advance for your assistance. We look forward to working with you further to improve Kentucky's air quality and submit our regional haze SIP as expeditiously as practical. If you have any questions, please contact Ms. Leslie Poff, Environmental Consultant, Program Planning Branch, Division for Air Quality at (502) 782-6735 or lesliem.poff@ky.gov.

Sincerely,

Recoverable Signature X Michael Kennedy

Signed by: Michael Kennedy

Michael Kennedy, P.E. Director

cc: Michael Tritapoe Tracy Palmer-Stanton Michael Zimmer

Appendix G-4

TVA Letter to KY DAQ

Response to Request to Reduce SO₂ Emissions at Shawnee August 14, 2023



Shawnee Fossil Plant, 7900 Metropolis Lake Road, West Paducah, Kentucky 42086-9450

Submitted to dep.gateway.ky.gov/eportal

August 14, 2023

Mr. Michael J. Kennedy, Director Commonwealth of Kentucky - Energy and Environment Cabinet Department for Environmental Protection Division for Air Quality 300 Sower Boulevard, 2nd Floor Frankfort, Kentucky 40601

Dear Mr. Kennedy:

TENNESSEE VALLEY AUTHORITY (TVA) – SHAWNEE FOSSIL PLANT (SHF) – SOURCE ID NO. 21-145-00006 – REQUEST FOR A SIGNIFICANT MODIFICATION TO TITLE V PERMIT NUMBER V-17-005 FOR A FEDERALLY ENFORCEABLE PERMIT LIMIT OF 8,208 TONS PER YEAR OF SULFUR DIOXIDE (SO₂) FOR COAL-FIRED BOILERS UNITS 1-9 FOR THE REGIONAL HAZE RULE (RHR)

Please find attached an application for a significant modification to the above-referenced Title V Air Quality Permit for SHF issued on May 20, 2018, and revised on May 24, 2022, in accordance with the 401 Kentucky Administrative Regulations 52:020, Section 16. This is a complete application based on the regulations in effect at the time of submittal. TVA requests that a permit shield, under 401 KAR 52:020 Section 11, be included in the permit when issued.

TVA is submitting this application pursuant to the letter, dated February 12, 2023, from the Division for Air Quality (Division) requesting that SHF reduce SO_2 emissions to decrease the plant's impact on Class I Areas as necessary to attain reasonable progress towards the State's visibility goals. As instructed in the Division's letter, TVA has chosen the option to implement an emissions limit of 8,208 tons per year of SO_2 , based on a 12-month rolling total, effective January 1, 2028.

TVA requests that demonstration of compliance with the SO_2 emission standard be determined according to the requirements specified in items (1) through (4) below.

- 1. The first month of the initial 12-month compliance period shall be January 2028 (the month that the emissions limit becomes effective);
- 2. The last month of the initial 12-month compliance period shall be December 2028 (the twelfth month after the emissions limit becomes effective);
- 3. Compliance with the emission limit shall be determined using continuous emissions monitoring systems (CEMS) that have been installed, certified, operated, and maintained according to 40 CFR Part 75, along with the following requirements:
 - a. Each compliance period shall include only "valid operating hours" (i.e., operating hours for which valid data are obtained for all the parameters used to determine hourly SO₂ mass emissions). Operating hours shall be excluded if either:
 - (i) The substitute data provisions of Part 75 are applied for any of the parameters used to determine the hourly SO₂ mass emissions; or
 - (ii) An exceedance of the full-scale range of a monitoring system occurs for any of the parameters used to determine the hourly SO₂ mass emissions; and

Mr. Michael J. Kennedy Page 2 August 14, 2023

- b. Only unadjusted, quality-assured values for all the parameters used to determine hourly SO₂ mass emissions shall be used in the emissions calculations; and
- 4. The total SO₂ mass emissions shall be calculated for the initial and each subsequent 12month rolling total compliance periods by summing the valid hourly SO₂ mass emissions values for all the valid operating hours in the compliance period for both common stacks.

TVA understands that the Environmental Protection Agency (EPA) published a final action on August 30, 2022, finding that 15 states, including Kentucky, failed to submit Regional Haze (RH) State Implementation Plans (SIPs) by the deadline of July 31, 2021. EPA's action has set an aggressive 2-year timeline for Kentucky to submit a RH SIP before EPA implements a Federal Improvement Plan (FIP). As a result, this permit application is being submitted by August 14, 2023, as requested by the Division, and includes an explanation and timeline of the milestones required for TVA to implement this SO₂ emission limit by January 1, 2028.

TVA is a non-profit corporate agency of the United States that provides electricity for business customers and local power distributors serving nearly 10 million people in parts of seven southeastern states, including Kentucky. We receive no taxpayer funding, deriving virtually all our revenues from sales of electricity. As part of our regional resource development mission, we operate the nation's largest public power system. The energy resources that we rely on to serve the public are diverse and include nuclear plants, natural gas plants, hydroelectric dams, coal-fired power plants, renewable energy, and energy efficiency.

TVA is committed to moving forward to reduce SHF's SO₂ emissions to decrease the plant's impact on Class I Areas as quickly as possible, while keeping customer reliability and affordability front and center. The "costs of compliance" and the "energy and non-air quality impacts of compliance" are among the four factors that the Clean Air Act (CAA) requires be considered in determining reasonable progress. Additionally, TVA has retired or announced the retirement of nearly 60% of its coal-fired units and, moving forward, is evaluating the impact of retiring the balance of the coal fleet by 2033, consistent with our strategic planning and decarbonization efforts. Under this incremental plan for retiring coal plants, SHF is anticipated to be the last coal-fired plant retired in or around 2033. SHF's "remaining useful life" is one of the four statutory factors taken into considering in determining reasonable progress for achieving the CAA's visibility goals.

Since receipt of the Division's letter, TVA has tested and is continuing to evaluate options for achieving an SO_2 emissions limit of 8,208 tons per year. These options include, but are not limited to, additional scrubbers, dry sorbent injection, natural gas co-firing, and possible derates and/or early retirements. TVA is carefully evaluating all of the options and is expected to have a final path forward by the end of 2024.

As a federal agency, TVA is required by the National Environmental Policy Act (NEPA) to consider the potential environmental impacts of any proposed action that may impact the physical environment before making a final decision to proceed with that action. The NEPA review for this project is scheduled to begin as soon as a meaningful evaluation of the project's environmental effects can be made, which typically occurs at around 50% completion of the project's detailed design. Based on the criterion, we expect the NEPA review to commence in early 2024. NEPA prohibits federal agencies from reaching a level of investment or commitment in a project prior to the completion of the NEPA review that would irreversibly commit the

Mr. Michael J. Kennedy Page 3 August 14, 2023

agency to the project or foreclose the consideration of reasonable alternatives. The NEPA process for evaluating the environmental impact of this project may take up to 18 to 24 to complete.

Once TVA evaluates and determines SHF's path forward and the NEPA process has concluded, TVA will begin the procurement process. Once the procurement process is complete, delivery of equipment and supplies and construction of the final design is expected to take 12 to 18 months because of supply chain issues that have developed since COVID-19.

Below is a timeline that includes the milestones and associated durations described in the abovementioned paragraphs.



If you have questions concerning this permit application or the information provided herein, please contact Tracy Stanton, Air Specialist IV, at (865) 209-6940, or by email at tpstanton@tva.gov.

Based on this information and belief formed after reasonable inquiry, the statements contained herein are true, accurate, and complete.

Sincerely,

lent

Shannon E. Benton Plant Manager

Enclosure

Appendix G-5

Owensboro Municipal Utilities – Elmer Smith Closure Letter August 12, 2020



August 12, 2020

Division for Air Quality Owensboro Regional Office 3032 Alvey Park Drive West, Suite 700 Owensboro, KY 42303

Attn: Mac Cann

Subject: Request to Rescind Permit No. V-18-020; Owensboro Municipal Utilities; AI 942

Dear Mr. Cann:

Owensboro Municipal Utilities- Elmer Smith Station (AI 942) by this letter requests that the active Title V Permit be rescinded. Elmer Smith Unit 1 and Unit 2 have been retired effective June 1, 2020. Therefore, the facility no longer has any active emission points due to the closure and decommissioning of the power plant.

OMU submitted the Retired Unit Exemption for Unit 1 and Unit 2 to USEPA and the Division on July 23, 2020.

Please contact me or Alex Conn at 270-926-3200 ext. 4322 if there are any questions.

Sincerely,

Kevin D. Frizzell,

General Manager

cc:

Zachary Bittner Alex Conn

Owensboro Municipal Utilities • P.O. Box 806 • Owensboro, KY 42302-0806 • 270-926-3200 • www.omu.org

Appendix G-6

Big Rivers Electric Corporation – D.B. Permit November 21, 2021

For Reference Only

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



AIR QUALITY PERMIT Issued under 401 KAR 52:020

Permittee Name: Mailing Address:	Big Rivers Electric Corporation 201 Third Street Henderson, KY 42420			
Source Name:	Big Rivers Electric Corporation - D.B. Wilson Station			
Mailing Address:	5663 State Route 85 West Centertown, KY 42328			
Source Location:	State Hwy. 85			
Permit:	V-21-018			
Agency Interest:	3319			
Activity:	APE20200005, APE20200006, & APE20210001			
Review Type:	Title V, Construction / Operating			
Source ID:	21-183-00069			
Regional Office:	Owensboro Regional Office			
itegional officer	3032 Alvey Park Dr. W., Suite 700			
	Owensboro, KY 42303			
	(270) 687-7304			
County:	Òhió			
Application				
Complete Date:	February 26, 2021			
Issuance Date:	November 21, 2021			
Expiration Date:	November 21, 2026			

Rick Shewekah

For Melissa Duff, Director Division for Air Quality

Version 10/16/13

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Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action
V-21-018	Renewal	APE20200005/ APE20200006/ APE202100001	2/26/2021	11/21/2021	Title V Renewal; Replace EU 01's WFGD to increase SO ₂ removal efficiency to 97%; Add EU 08 Gypsum Handling Operations & EU 09 FGD Emergency Generator; Add Insignificant Activity Fly Ash Barge Loading

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.

Emissions Unit 01 (W1): Indirect Heat Exchanger – Coal-Fired Boiler

Description:

Pulverized coal fired, dry bottom, wall fired boiler with electrostatic precipitator, low NOx burners, hydrated lime injection, wet flue gas desulfurization (WFGD), and selective catalytic reduction (SCR)

Primary Fuel: Bituminous Coal

Secondary Fuels: No. 2 fuel oil for startup and stabilization; petroleum coke

Maximum Continuous Rating: 4,585 MMBtu/hour

Construction Commenced: December 1978

APPLICABLE REGULATIONS:

401 KAR 52:060, *Acid rain permits*, incorporating the Federal Acid Rain provisions as codified in 40 CFR parts 72 to 78 (See Section J)

- **401 KAR 51:160** *NO_x requirements for large utility and industrial boilers* (see Section K)
- **401 KAR 51:210,** *CAIR NOx annual trading program* (see Section K)
- 401 KAR 51:220, CAIR NOx ozone season trading program (see Section K)

401 KAR 51:230, CAIR SO₂ trading program (see Section K)

- **401 KAR 51:240,** *Cross-State Air Pollution Rule (CSAPR) NO_x annual trading program* (see Section L)
- **401 KAR 51:260,** *Cross-State Air Pollution Rule (CSAPR) SO*₂ *group 1 trading program* (see Section L)
- **401 KAR 59:015,** *New indirect heat exchangers*
- **401 KAR 60:005,** Section 2(2)(b), 40 CFR 60.40Da through 60.52Da (**Subpart Da**), Standards of Performance for Electric Utility Steam Generating Units
- **401 KAR 63:002,** Section 2(4)(yyyy), 40 CFR 63.9980 through 63.10042, Tables 1 to 9, and Appendices A to B (Subpart UUUUU), National Emission Standards for Hazardous Air Pollutants: Coal and Oil-Fired Electric Utility Steam Generating Units

40 CFR **52.21**, *Prevention of Significant Deterioration of Air Quality*

40 CFR 97, Subpart GGGGG, CSAPR NOx Ozone Season Group 3 Trading Program (see Section L)

PRECLUDED REGULATION:

401 KAR 51:017, Prevention of significant deterioration

1. **Operating Limitations:**

a) At all times, the permittee shall operate and maintain Emission Unit 01 (W1), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance procedures, review of operation and maintenance procedures, review of operation and maintenance procedures.

- b) The permittee shall meet the work practice standards of Items 3. and 4. in Table 3 to Subpart UUUUU of Part 63 at all times during startup and shutdown: [401 KAR 59:015, Section 7(2)(b); 40 CFR 63.9991(a)(1); and 40 CFR 63.10000(a)]
 - 1) The permittee shall comply with paragraph (1) of the definition of "startup" in 40 CFR 63.10042: *Startup* means the first-ever firing of fuel in Emission Unit 01 for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup. [40 CFR 63.10000(a) and 40 CFR 63.10005(j), referencing Table 3, Item 3a.]
 - i) The permittee shall operate all Continuous Monitoring System(s) (CMS) during startup.
 - ii) For startup of a unit, the permittee shall use clean fuels as defined in 40 CFR 63.10042 for ignition.
 - iii) Once the permittee converts to firing coal, the permittee shall engage all of the applicable control technologies except dry scrubber and SCR. The permittee shall start the dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation.
 - iv) The permittee shall comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in 40 CFR 63, Subpart UUUUU.
 - v) The permittee shall keep records during startup periods.
 - vi) The permittee shall provide reports concerning activities and startup periods, as specified in 40 CFR 63.10011(g) and 40 CFR 63.10021(h) and (i), and 63.10031.
 - vii) To satisfy the initial and continuous compliance requirements of 40 CFR 63.10011(g) and 40 CFR 63.10021(h), the permittee may use the diluent cap and default gross output values, as described in 40 CFR 63.10007(f), during startup periods or shutdown periods. [40 CFR 63.10011(g)(1)]
 - 2) The permittee has the option of using either definition of "startup" defined in 40 CFR 63.10042 and 40 CFR 63, Subpart UUUUU, Table 3, Item 3.a.(1) or Item 3.a.(2) for demonstrating initial compliance. The permittee may switch from paragraph (1) of the definition of "startup" to paragraph (2) (or vice-versa) provided that all the Notification, Reporting, and Recordkeeping requirements of 40 CFR 63.10030(e)(8)(iii)(A) through (E). [40 CFR 63.10030(e)(8) and (e)(8)(iii)]
 - 3) The permittee shall comply with the following during a shutdown: *Shutdown* means the period in which cessation of operation of Emission Unit 01 is initiated for any purpose. Shutdown begins when Emission Unit 01 no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in Emission Unit 01, whichever is earlier. Shutdown ends when Emission Unit 01 no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in Emission Unit 01. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown. [40 CFR 63.10000(a) and 40 CFR 63.10005(j), referencing Table 3, Item 4.; 40 CFR 63.10042, *Shutdown*]
 - i) The permittee shall operate all CMS during shutdown.

- ii) The permittee shall collect appropriate data and calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used.
- iii) While firing coal during shutdown, the permittee shall vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal fuel being fed into Emission Unit 01 and for as long as possible thereafter considering operational and safety concerns.
- iv) The permittee shall operate the controls when necessary to comply with other standards made applicable to Emission Unit 01 by a permit limit or a rule other than 40 CFR 63, Subpart UUUUU and that require operation of the control devices.
- v) If, in addition to the fuel used prior to initial of shutdown, another fuel shall be used to support the shutdown process, that additional fuel shall be one or a combination of the clean fuels defined in 40 CFR 63.10042 and shall be used to the maximum extent possible, taking into account considerations such as not compromising boiler or control device integrity.
- vi) The permittee shall comply with all applicable emission limits at all times except during periods of startup and shutdown at which time the permittee shall meet the work practice in 40 CFR 63, Subpart UUUUU, Table 3.
- vii) The permittee shall collect monitoring data during shutdown periods, as specified in 40 CFR 63.10020(a).
- viii) The permittee shall maintain records during shutdown periods, as provided in 40 CFR 63.10032 and 40 CFR 63.10021(h).
- ix) The permittee shall provide reports concerning activities and shutdown periods, as specified din 40 CFR 63.10011(g), 40 CFR 63.10021(i), and 40 CFR 63.10031.

Compliance Demonstration:

See 4. <u>Specific Monitoring Requirements</u> i) and o), 5. <u>Specific Recordkeeping</u> <u>Requirements</u> b), h), n), and p), and 6. <u>Specific Reporting Requirements</u> r).

- c) The permittee shall conduct periodic performance tune-ups as specified in 40 CFR 63.10021(e)(1) through (9). The permittee may delay the first burner inspection until the next scheduled unit outage, provided it meets the requirements of 40 CFR 63.10005. Subsequently, the permittee shall perform an inspection of the burner at least once every 36 calendar months unless the EGU employs neural network combustion optimization during normal operations, in which case the permittee shall perform an inspection of the burner and combustion controls at least once every 48 calendar months. If the EGU is offline when a deadline to perform the tune-up passes, the permittee shall perform the tune-up work practice requirements within 30 days after the re-start of the affected unit. [40 CFR 63.10000(e), 40 CFR 63.10006(i), and 40 CFR 63.10021(e)]
 - As applicable, inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows: [40 CFR 63.10021(e)(1)]
 - i) Burner or combustion control components parts needing replacement that affect the ability to optimize NO_x and CO shall be installed within 3 calendar months after the burner inspection; [40 CFR 63.10021(e)(1)(i)]

- ii) Burner or combustion control component parts that do not affect the ability to optimize NO_x and CO may be installed on a schedule determined by the operator;
 [40 CFR 63.10021(e)(1)(ii)]
- 2) As applicable, inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment shall be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type; [40 CFR 63.10021(e)(2)]
- As applicable, observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors; [40 CFR 63.10021(e)(3)]
- 4) As applicable, evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors; [40 CFR 63.10021(e)(4)]
- 5) Inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O₂ probes and/or sensors, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary; [40 CFR 63.10021(e)(5)]
- 6) Optimize combustion to minimize generation of CO and NO_x. This optimization should be consistent with the manufacturer's specifications, if available, or best combustion engineering practice for the applicable burner type. NO_x optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, and adjusting combustion zone temperature profiles; [40 CFR 63.10021(e)(6)]
- 7) While operating at full load or the predominantly operated load, measure the concentration in the effluent stream of CO and NO_x in ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). The permittee may use portable CO, NO_x and O₂ monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather than continual values before and after each optimization adjustment made by the system; [40 CFR 63.10021(e)(7)]
- 8) Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs 40 CFR 63.10021(e)(1) through (e)(9) including: [40 CFR 63.10021(e)(8)]
 - i) The concentrations of CO and NO_x in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems; [40 CFR 63.10021(e)(8)(i)]
 - ii) A description of any corrective actions taken as a part of the combustion adjustment; and [40 CFR 63.10021(e)(8)(ii)]

- iii) The type and amount of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period; and [40 CFR 63.10021(e)(8)(iii)]
- 9) Prior to January 1, 2024, report the tune-up date electronically, in a PDF file, in your semiannual compliance report, as specified in 40 CFR 63.10031(f)(4) and (6) and, if requested by the Administrator, in hard copy, as specified in 40 CFR 63.10031(f)(5). On and after January 1, 2024, report the tune-up date electronically in your quarterly compliance report, in accordance with 40 CFR 63.10031(g) and Section 10.2 of Appendix E to 40 CFR 63, Subpart UUUUU. The tune-up report date is the date when tune-up requirements in 40 CFR 63.10021(e)(6) and (7) are completed. [40 CFR 63.10021(e)(9)]
- d) If the permittee demonstrates initial compliance with a particular emission limit using a continuous monitoring system, the CMS shall pass a performance evaluation prior to the initial compliance demonstration. If a CMS has been previously certified under another state or federal program and is continuing to meet the on-going quality-assurance (QA) requirements of that program, then, provided that the certification and QA provisions of that program meet the applicable requirements of 40 CFR 63.10010(b) through (h), an additional performance evaluation of the CMS is not required under 40 CFR 63, Subpart UUUUUU [40 CFR 63.10005(d)].
- e) The permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments, and any scheduled maintenance as defined in the permittee's site-specific monitoring plan. The permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [40 CFR 63.10020(b)]
- f) The permittee may not use data recorded during EGU startup or shutdown in calculations used to report emissions, except as otherwise provided in 40 CFR 63.10000(c)(1)(vi)(B) and 40 CFR 63.10005(a)(2)(iii). In addition, data recorded during monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, or required monitoring system quality assurance or control activities may not be used in calculations used to report emissions or operating levels. The permittee shall use all of the quality-assured data collected during all other periods in assessing the operation of the control device and associated control system. [40 CFR 63.10020(c)]
- g) Periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-ofcontrol periods, and required monitoring system quality assurance or quality control activities excluding zero and span checks shall be reported as time the monitor was inoperative (downtime) under 40 CFR 63.10(c). Failure to collect required quality-assured data during monitoring system malfunctions, monitoring system out-of-control periods, or

repairs associated with monitoring system malfunctions or monitoring system out-ofcontrol periods is a deviation from the monitoring requirements. [40 CFR 63.10020(d)]

h) The permittee shall comply with the General Provisions as specified in Table 9 of 40 CFR 63, Subpart UUUUU [40 CFR 63.10040].

2. <u>Emission Limitations:</u>

- a) Particulate matter (PM) emissions shall not exceed:
 - 0.03 pounds per million British thermal units (lb/MMBtu), based on a boiler operating day, and shall apply at all times except during periods of startup, shutdown, or malfuntion; and [40 CFR 60.42Da(a); 40 CFR 60.48Da(a); 40 CFR 52.21]

Compliance Demonstration:

Compliance with the applicable daily average PM emissions limit is determined by calculating the arithmetic average of all hourly emission rates each boiler operating day, except for data obtained during startup, shutdown, or malfunction periods. Daily averages are only calculated for boiler operating days that have non-out-of-control data for at least 18 hours of unit operation during which the standard applies. Instead, all of the non-out-of-control hourly emission rates of the operating day(s) not meeting the minimum 18 hours non-out-of-control data daily average requirement are averaged with all of the non-out-of-control hourly emission rates of the next boiler operating day with 18 hours or more of non-out-of-control PM CEMS data to determine compliance. [40 CFR 60.48Da(f)] See **5.** <u>Specific Recordkeeping Requirements</u> k) and **6.** <u>Specific Reporting Requirements</u> a).

2) 0.030 lb/MMBtu, based on a 30 boiler operating day rolling average, and shall apply at all times except during periods of startup, shutdown, or malfunction. However, the permittee is required to meet the work practice requirements, items 3 and 4, in Table 3 of 40 CFR 63, Subpart UUUUU during periods of startup or shutdown. [40 CFR 63.9991(a)(1), Table 2; 40 CFR 63.10000(a); and 40 CFR 63.10005(j)] Compliance Demonstration:

See 3. <u>Testing Requirements</u> d), 4. <u>Specific Monitoring Requirements</u> k), 5. <u>Specific Recordkeeping Requirements</u> g) and j), and 6. <u>Specific Reporting Requirements</u> e) and f).

- b) Sulfur dioxide (SO₂) emissions:
 - Shall not exceed 1.20 lb/MMBtu heat input and 10 percent of the potential combustion concentration (90 percent reduction); 30 percent of the potential combustion concentration (70 percent reduction) when emissions are less than 0.60 lb/MMBtu heat input; 1.4 lb/MWh gross energy output; or 0.15 lb/MMBtu heat input, on a 30-day rolling average basis. These emission limits shall apply at all times except during periods of startup, shutdown, or malfunction. [40 CFR 60.43Da(a); 40 CFR 60.43Da(g); 40 CFR 60.48Da(a); and 40 CFR 52.21]

Compliance Demonstration:

Compliance with the applicable SO₂ emissions limit and percentage reduction under 40 CFR 60.43Da are based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30-boiler operating day

rolling average emission rate and a new percent reduction for SO₂ are calculated to demonstrate compliance with the standards. The 30-boiler operating day rolling average is determined by calculating the arithmetic average of all hourly emission rate for the 30 successive boiler operating days, except for data obtained during startup, shutdown, or malfunction. Percentage reduction is determined based on the average inlet and outlet SO₂ emission rates for the 30 successive boiler operating days. [40 CFR 60.48Da(b); 40 CFR 60.48Da(d); and 40 CFR 60.48Da(e)] See 4. Specific Monitoring Requirements a) through d), 6. Specific Reporting Requirements a) and h).

 Shall not exceed 0.627 lb/MMBtu, based on a 30-day rolling average, upon final action by the U.S. EPA designating Ohio County "unclassifiable/attainment" or "attainment" with the 2010 1-hour SO₂ NAAQS [401 KAR 51:010, Section 9(2) and 401 KAR 53:010].

Compliance Demonstration:

In determining emission rates for SO₂, the permittee shall adhere to 4. <u>Specific</u> <u>Monitoring Requirements</u> a) through d), 5. <u>Specific Recordkeeping Requirements</u> e), and 6. <u>Specific Reporting Requirements</u> a).

3) To preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality, emissions of sulfur dioxide shall not exceed 12,023 tons during any consecutive 12-month period in which any amount of petroleum coke is combusted.

Compliance Demonstration:

See 4. <u>Specific Monitoring Requirements</u> c) and 6. <u>Specific Reporting</u> <u>Requirements</u> b).

- c) Nitrogen oxides (NO_x) emission shall not exceed:
 - 0.60 lb/MMBtu, based on a 30-boiler operating day rolling average, and shall apply at all times except during periods of startup, shutdown, or malfunction. [40 CFR 60.44Da(a)(1); 40 CFR 60.48Da(a); and 40 CFR 52.21]

Compliance Demonstration:

Compliance with the applicable NO_x emissions limit under 40 CFR 60.44Da is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30-boiler operating day rolling average emission rate for NO_x is calculated to demonstrate compliance with the standards. The 30-boiler operating day rolling average is determined by calculating the arithmetic average of all hourly emission rate for the 30 successive boiler operating days, except for data obtained during startup, shutdown, or malfunction. [40 CFR 60.48Da(b) and 40 CFR 60.48Da(d)] See 4. <u>Specific Monitoring Requirements</u> a) and f) and 6. <u>Specific</u> <u>Reporting Requirements</u> a).

- 2) See Section J, Acid Rain. [40 CFR Part 76]
- d) For hydrogen chloride (HCl), the permittee shall not exceed 2.0×10⁻³ lb/MMBtu [40 CFR 63.9991(a)(1) Table 2], and shall apply at all times except during periods of startup or shutdown [40 CFR 63.10000(a)]. However, the permittee is required to meet the work practice requirements, items 3 and 4, in Table 3 of 40 CFR 63, Subpart UUUUU during periods of startup or shutdown. [40 CFR 63.10000(a) & 40 CFR 63.10005(j)]

Compliance Demonstration: See 3. <u>Testing Requirements</u> a) through c).

e) For mercury (Hg), the permittee shall not exceed 1.2 pounds per trillion British thermal units (lb/TBtu), based on a 30-boiler operating day rolling average derived from the CEMS data, and shall apply at all times except during periods of startup or shutdown. However, the permittee is required to meet the work practice requirements, items 3 and 4, in Table 3 of 40 CFR 63, Subpart UUUUU during periods of startup or shutdown. [40 CFR 63.9991(a)(1), Table 2; 40 CFR 63.10000(a); 40 CFR 63.10005(j); and 40 CFR 63.10031(f)(2)]

Compliance Demonstration:

See 3. <u>Testing Requirements</u> d), 4. <u>Specific Monitoring Requirements</u> j), 5. <u>Specific</u> <u>Recordkeeping Requirements</u> g), and 6. <u>Specific Recordkeeping Requirements</u> d).

3. <u>Testing Requirements:</u>

- a) The permittee shall perform quarterly stack testing to demonstrate compliance with the applicable HCl emission limit in 2. Emission Limitations d). [Table 2 of 40 CFR 63, Subpart UUUUU] The permittee:
 - Shall conduct the performance test for HCl as defined in 3.a. through 3.f. of Table 5 in 40 CFR 63, Subpart UUUUU and 40 CFR 63.10007 at least quarterly, with results in (lb/MMBtu) [40 CFR 63.10021(d) and 40 CFR 63.10006(d)], and at least 45 calendar days, measured from the test's end date, shall separate performance tests conducted every quarter; and [40 CFR 63.10006(f)(1)(i)]
 - May skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test shall be conducted at least once every calendar year [40 CFR 63.10021(d)(1)], and shall follow the conditions of 3. <u>Testing Requirements</u> b) and c). [40 CFR 63.10006(f)]
- b) For units demonstrating compliance through quarterly emission testing, the permittee shall conduct a performance test in the 4th quarter of a calendar year if the EGU has skipped performance tests in the first 3 quarters of the calendar year. [40 CFR 63.10006(f)(2)]
- c) If the EGU misses a performance test deadline due to being inoperative and if 168 or more boiler operating hours occur in the next test period, the permittee shall complete an additional performance test in that period. At least 15 calendar days shall separate two performance tests conducted in the same quarter. [40 CFR 63.10006(f)(3) and (f)(3)(i)]
- d) The permittee shall demonstrate continuous compliance with the Hg and PM limit by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO₂, O₂, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day rolling average basis, updated at the end of each new boiler operating day. The permittee shall use Equation 8 in 40 CFR 63, Subpart UUUUUU to determine the 30-boiler operating day rolling average [40 CFR 63.10021(b)]. The permittee shall conduct each performance test according to 40 CFR 63.10007 and Table 5 of 40 CFR 63, Subpart UUUUU [40 CFR 63.10007(b)].

4. Specific Monitoring Requirements:

- a) Continuous emissions monitoring systems (CEMS) shall be installed, calibrated, maintained, and operated for measuring SO₂ emissions, NO_x emissions and either oxygen (O₂) or carbon dioxide (CO₂) emissions. Oxygen or carbon dioxide shall be monitored at each location where sulfur dioxide or nitrogen oxides emissions are monitored. Daily calibration drift assessments and quarterly accuracy determinations shall be done in accordance with Procedure 1 in Appendix F of 40 CFR Part 60. The permittee shall ensure the CEMS are in compliance with the requirements of 40 CFR 60.50Da and 40 CFR 75. [401 KAR 59:005, Section 4; Performance Specification 2 or 3 of Appendix B to 40 CFR 60 or Appendix A and B to 40 CFR 75; 401 KAR 52:020, Section 10; 40 CFR 60.49Da(b); 40 CFR 60.49Da(c)(1); and 40 CFR 60.49Da(w)(1)]
- b) To meet the monitoring requirement for sulfur dioxide, the permittee shall use a SO₂ CEMS. If any 30-day rolling average SO₂ value exceeds the standard, as calculated according to 2. <u>Emission Limitations</u> b), the permittee shall, as appropriate, initiate an inspection of the control equipment and/or CEM system and make any repairs or take corrective action as soon as practicable. [401 KAR 52:020, Section 10; 40 CFR 60.43Da(g); and 40 CFR Part 76]
- c) The permittee shall use the SO₂ CEMS to determine the monthly and twelve consecutive month emissions from this electrical generating unit. [40 CFR 52.21]
- d) The permittee shall monitor SO₂ emissions using a continuous monitoring system at both the inlet and outlet of the SO₂ control device. An "as fired" fuel monitoring system (upstream of coal pulverizers) meeting the requirements of Reference Method 19 may be used to determine potential SO₂ emissions in place of a continuous emission monitor at the inlet of the SO₂ control device. [40 CFR 60.49Da(b)(1) and (3)]
- e) The following procedures shall be used to conduct monitoring system performance evaluations and calibration checks as required under 401 KAR 59:005, Section 4(3).
 - 1) Reference Method 6 or 7, as applicable shall be used for conducting performance evaluations of SO_2 and NO_x CEMS.
 - SO₂ or NO_x, as applicable, shall be used for preparing calibration mixtures under Performance Specification 2 of Appendix B to 40 CFR 60 filed by reference in 401 KAR 50:015 Section 1(c)2.b.
 - 3) The span value for the continuous monitoring system for measuring nitrogen oxides shall be 1,000 ppm, or span values as specified in 40 CFR 60.49Da(i)(3)(i) or Section 2.1.2 in Appendix A to 40 CFR 75.
 - 4) The span value for the CEMS for measuring SO₂ at the inlet to the SO₂ control device shall be 125 percent of the maximum estimated hourly potential emissions of fuel fired, and the outlet of the control device shall be 50 percent of the maximum estimated hourly potential emissions of the fuel fired, or span values as specified in Appendix A to 40 CFR 75.

- f) To meet the monitoring requirement for NO_x, the permittee shall use a continuous emission monitor. Excluding the startup and shut down periods, if any 30-day rolling average NO_x value exceeds the standard, as calculated according to 2. Emission Limitations c), the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any repairs or take any corrective actions as soon as practicable. [40 CFR 60.49Da(c)(1) and (2) and 40 CFR Part 76]
- g) All the continuous emission monitoring systems shall be operated and data shall be recorded during all periods of operation of the emission units including periods of startup, shutdown, or malfunction, except for CEMS breakdowns, repairs, calibration checks, and zero and span adjustments. [40 CFR 60.49Da(e)]
- h) When emission data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emission data for at least 90 percent of all operating hours for each 30 successive boiler operating days by using other monitoring systems as approved by the Division or other data substitution methods, including those described in 40 CFR 60.49Da(h) and 40 CFR 75, to provide emission data for a minimum of 18 hours in at least 22 out of 30 successive boiler operating days. [40 CFR 60.49Da(f)(1) and (2)]
- i) The permittee shall monitor the date, time, and duration for each startup and shutdown event, including the type of startup event that occurs (cold, warm, hot, etc.). [401 KAR 52:020, Section 10]
- j) The permittee shall install, certify, maintain, and operate an Hg CEMS for Emission Unit 01, in accordance with Appendix A of 40 CFR 63, Subpart UUUUU. [40 CFR 63.10000(c)(1)(vi) and 40 CFR 63.10010(g)]
- k) The permittee shall install, certify, maintain, and operate a PM CEMS for Emission Unit 01, in accordance with 40 CFR 60.49Da(v) and 40 CFR 63.10010(i). [40 CFR 60.42a(b) and 40 CFR 63.10005(d)(1)]
- The permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with 40 CFR 75 if the permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations. Alternatively, the permittee may use appropriate fuel-specific default moisture values from 40 CFR 75.11(b) to estimate the moisture content of the stack gas. If the permittee installs and operates a moisture monitoring system, the permittee shall not use substituted moisture data in the emissions calculations. [40 CFR 63.10010(d)]
- m) The permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to

operation as expeditiously as practicable. The permittee may not use data recorded during EGU startup or shutdown or monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. The permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. Failure to collect required data is a deviation from the monitoring requirements. [40 CFR 63.10020]

- n) If the permittee demonstrates compliance with any applicable emissions limit through use of a continuous monitoring system (CMS), where a CMS includes a continuous parameter monitoring system (CPMS) as well as a continuous emissions monitoring system (CEMS), the permittee shall develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before the initial performance evaluation (where applicable) of the CMS. This requirement also applies if the permittee petitions the Administrator for alternative monitoring parameters under 40 CFR 63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under Appendix B of 40 CFR 60 or 40 CFR 75, and that meet the requirements of 40 CFR 63.10010. Using the process described in 40 CFR 63.8(f)(4), the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in 40 CFR 63.10000(d) and, if approved, include those in the site-specific monitoring plan. The monitoring plan shall address the provisions in paragraphs (d)(2) through (5) of 40 CFR 63.10000. [40 CFR 63.10000(d)(1)]
- o) The permittee shall collect monitoring data during startup periods, as specified in 40 CFR 63.10020(a) and (e). [40 CFR 63, Subpart UUUUU, Table 3, Item 3.d.]

5. <u>Specific Recordkeeping Requirements:</u>

- 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 401 KAR 59:005 and 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two (2) years following the date of such measurements, maintenance, reports, and records. [401 KAR 59:005, Section 3(4) and 40 CFR 60.7(f)]
- b) The permittee shall maintain the records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the emission unit; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [401 KAR 59:005, Section 3(2) and 40 CFR 60.7(b)]
- c) The permittee shall maintain records of: [401 KAR 52:020, Section 10]
 - 1) Each fuel analysis;
 - 2) The rate of fuel combusted for each fuel type, on a daily basis;

- 3) The heating value and ash content on a weekly basis;
- 4) The average electrical output and the minimum and maximum hourly generation rate on a daily basis;
- 5) When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted;
- 6) Data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of applicable standard; and
- 7) Results of compliance tests.
- d) The permittee shall make available to the EPA Administrator such records as may be necessary to determine whether the performance tests have been done according to the requirements in 40 CFR 63.10007. [40 CFR 63.10007(g)]
- e) The permittee shall calculate and record the total SO₂ emissions from Emissions Unit 01 on a monthly and 12-consecutive month basis. [401 KAR 52:020, Section 10]
- f) The permittee shall maintain records of the dates on which any petroleum coke is combusted and the monthly and annual quantities combusted. [401 KAR 52:020, Section 10]
- g) In regards to Hg and PM CEMS, the permittee shall maintain records required under Appendix A and Appendix C of 40 CFR 63, Subpart UUUUU. If electing to conduct periodic (e.g., quarterly or annual) performance stack tests, then, for each test completed on or after January 1, 2024, the permittee shall keep records of the applicable data elements under 40 CFR 63.7(g). The permittee shall also keep records of all data elements and other information in Appendix E to 40 CFR 63, Subpart UUUUU that apply to the permittee's compliance strategy. The permittee shall keep records according to the following: [40 CFR 63.10032(a)]
 - In accordance with 40 CFR 63.10(b)(2)(xiv), a copy of each notification or report that the permittee submits to comply with 40 CFR 63, Subpart UUUUU. The permittee shall also keep records of all supporting documentation for the initial Notifications of Compliance Status, semiannual compliance reports, or quarterly compliance reports that the permittee submits. [40 CFR 63.10032(a)(1)]
 - Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.10032(a)(2)]
- h) For each CEMS, the permittee shall maintain the following records: [40 CFR 63.10032(b)]
 - 1) Records described in 40 CFR 63.10(b)(2)(vi) through (xi); [40 CFR 63.10032(b)(1)]
 - Previous versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3); [40 CFR 63.10032(b)(2)]
 - Request for alternatives to relative accuracy test for CEMS as required in 40 CFR 63.8(f)(6)(i); and [40 CFR 63.10032(b)(3)]
 - 4) Records of the date and time that each deviation started and stopped and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [40 CFR 63.10032(b)(4)]

- i) The permittee shall keep the records required in Table 7 of 40 CFR 63, Subpart UUUUU, including records of all monitoring data and calculated averages for applicable CPMS operating limits, to show continuous compliance with each emission limit and operating limit that applies to W1. [40 CFR 63.10032(c)]
- j) The permittee shall record the output of the PM CEMS as specified in 40 CFR 63.10010(i)(1) through (4). [40 CFR 63.10010(i)]
- k) In regards to the applicable emission limitations of 40 CFR 63, Subpart UUUUU, the permittee shall maintain the following records: [40 CFR 63.10032(d)]
 - 1) Monthly fuel use, including the type of fuel and amount used. [40 CFR 63.10032(d)(1)]
 - 2) If the permittee combusts non-hazardous secondary material that has been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the permittee shall keep a record which documents how the secondary material meets each of the legitimacy criteria. If the permittee combusts a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(2), the permittee shall keep records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2 If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the permittee shall keep a record which documents how the fuel satisfies the requirements of the petition process. [40 CFR 63.10032(d)(2)]
- The permittee shall maintain records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment. [40 CFR 63.10032(g)]
- m) The permittee shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.10000(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 63.10032(h)]
- n) The permittee shall maintain records of the date, time, and duration for each startup and shutdown event. If applicable, the permittee shall maintain records of the determination of the maximum clean fuel capacity, the maximum hourly clean fuel heat input, the hourly clean fuel heat input and the information required in 40 CFR 63.10020(e). The permittee shall also maintain records of the type of fuel used during each startup and shutdown and the type of startup event that occurs (cold, warm, hot, etc.) [40 CFR 63.10032(f); 40 CFR 63.10032(i); and 401 KAR 52:020, Section 10].
- o) Records shall be 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 (i.e. occurrence, measurement, maintenance, corrective action, report, or record) for five (5) years following the date of each occurrence with at least the most recent two (2) years of records (after the date of each occurrence) on-site. [40 CFR 63.10033]
- p) The permittee shall maintain records during startup periods, as specified in 40 CFR

63.10021(h) and 40 CFR 63.10032. [40 CFR 63, Subpart UUUUU, Table 3, Item 3.d.]

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

- a) Minimum data requirements shall be maintained and furnished in the format specified by the Division. The permittee shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information: [40 CFR 60.51Da]
 - 1) The magnitude of the excess emission computed in accordance with 40 CFR 60.7, any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.
 - 2) All hourly averages shall be reported for PM, SO₂ and NO_x monitors. The hourly averages shall be made available in the format specified by the Division.
 - 3) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the emission unit. The nature and cause of any malfunction (if known), and the corrective action taken or preventive measures adopted.
 - 4) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.
 - 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.
 - 6) A data assessment report (DAR), prepared according to Section 7 of Procedure 1 in Appendix F to 40 CFR Part 60, shall be submitted with each compliance report required under 40 CFR 60.51Da. If the permittee elects to implement the alternative data assessment procedures described in 40 CFR 60.49Da(w)(1) through (4), each data assessment report shall include a summary of the results of all of the RATAs, linearity checks, CGAs, and calibration error or drift assessments required. [40 CFR 60.49Da(w)(1) and (5)]
 - 7) For SO₂ and NO_x, all information listed in 40 CFR 60.51Da (b)(1) through (9) shall be reported to the Division for each 24 hour period. [40 CFR 60.51Da(b)]
 - 8) If the minimum quantity of emission data as required by 40 CFR 60.49Da is not obtained for any 30-successive boiler operating days, the information specified in 40 CFR 60.51Da(c)(1) through (5), obtained under the requirements of 40 CFR 60.48Da(h), shall be reported for that 30-day period. [40 CFR 60.51Da(c)]
 - 9) If fuel pretreatment credit toward the SO₂ emission standard under 40 CFR 60.43Da is claimed, the permittee shall submit a signed statement including all information as described in 40 CFR 60.51Da(e)(1) and (2). [40 CFR 60.51Da(e)]
 - 10) For any periods for which SO_2 or NO_x emissions data are not available, the permittee shall submit a signed statement indicating if any changes were made in operation of the emission control system during the period of data unavailability. Operations of the control system and emissions unit during periods of data unavailability are to be compared with operation of the control system and emissions unit before and following the period of data unavailability. [40 CFR 60.51Da(f)]

- 11) The permittee shall submit a signed statement including all information as described in 40 CFR 60.51Da(h)(1) through (4). [40 CFR 60.51Da(h)]
- b) The permittee shall submit a report of sulfur dioxide emissions for the previous twelve consecutive month period every six months in accordance with Section F.5 Monitoring, Recordkeeping and Reporting Requirements. Exceedances of the emission limitation specified in 2) <u>Emission Limitations</u> b) shall be reported within thirty days following the date when the exceedance is determined. [401 KAR 52:020, Section 10]
- c) For exceedances that occur as a result of start-up, the permittee shall report:
 - 1) The type of start-up (cold, warm, or hot);
 - 2) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.
 - [401 KAR 52:020, Section 10]
- d) In regards to the Hg CEMS, the permittee shall meet the electronic reporting requirements of Appendix A of 40 CFR 63, Subpart UUUUU. [40 CFR 63.10031(a)(1)]
- e) In regards to the PM CEMS, the permittee shall meet the electronic reporting requirements of Appendix C of 40 CFR 63, Subpart UUUUU. Electronic reporting of hourly PM emissions data shall begin with the later of the first operating hour on or after January 1, 2024, or the first operating hour after completion of the initial PM CEMS correlation test. [40 CFR 63.10031(a)(3)]
- f) The permittee shall report the output of the PM CEMS as specified in 40 CFR 63.10010(i)(1) through (4). [40 FR 63.10010(i)]
- g) Prior to January 1, 2024, report the tune-up date electronically, in a PDF file, in the semiannual compliance report, as specified in 40 CFR 63.10031(f)(4) and (6) and, if requested by the Administrator, in hard copy, as specified in 40 CFR 63.10031(f)(5). On and after January 1, 2024, report the tune-up date electronically in the quarterly compliance report, in accordance with 40 CFR 63.10031(g) and section 10.2 of Appendix E to 40 CFR 63, Subpart UUUUU. The tune-up report date is the date when tune-up requirements in 40 CFR 63.10021(e)(6) and (7) are completed. [40 CFR 63.10021(e)(9)]
- h) In regards to the SO₂ CEMS, the permittee shall use the ECMPS Client Tool to submit the following information to EPA (except where it is already required to be reported or has been previously provided under the Acid Rain Program or another emissions reduction program that requires the use of 40 CFR 75): [40 CFR 63.10031(a)(5)]
 - Monitoring plan information for the SO₂ CEMS and for any additional monitoring systems that are required to convert SO₂ concentrations to units of the emission standard, in accordance with 40 CFR 75.62 and 75.64(a)(4); [40 CFR 63.10031(a)(5)(i)]
 - 2) Certification, recertification, quality-assurance, and diagnostic test results for the SO₂ CEMS and for any additional monitoring systems that are required to convert SO₂

concentrations to units of the emission standard, in accordance with 40 CFR 75.64(a)(5); and [40 CFR 63.10031(a)(5)(ii)]

- 3) Quarterly electronic emissions reports. The permittee shall submit an electronic quarterly report within 30 days after the end for each calendar quarter, starting with a report for the calendar quarter in which the initial 30 boiler-operating day performance test begins. Each report shall include the following information: [40 CFR 63.10031(a)(5)(iii)]
 - i) The applicable operating data specified in 40 CFR 75.57(b); [40 CFR 63.10031(a)(5)(iii)(A)]
 - ii) An hourly data stream for the unadjusted SO₂ concentration (in ppm, rounded to one decimal place), and separate unadjusted hourly data streams for the other parameters needed to convert the SO₂ concentrations to units of the standard. (Note: If a default moisture value is used in the emission rate calculations, an hourly data stream is not required for moisture; rather, the default value shall be reported in the electronic monitoring plan.); [40 CFR 63.10031(a)(5)(iii)(B)]
 - iii) An hourly SO₂ emission rate data stream, in units of the standard (i.e., lb/MMBtu or lb/MWh, as applicable), calculated according to 40 CFR 63.10007(e) and (f)(1), rounded to the same precision as the emission standard (i.e., with one leading non-zero digit and one decimal place), expressed in scientific notation; [40 CFR 63.10031(a)(5)(iii)(C)]
 - iv) The results of all required daily quality-assurance tests of the SO₂ monitor and the additional monitors used to convert SO₂ concentration to units of the standard, as specified in Appendix B of 40 CFR 75; and [40 CFR 63.10031(a)(5)(iii)(D)]
 - v) A compliance certification, which includes a statement, based on reasonable inquiry of those persons with primary responsibility for ensuring that all SO₂ emissions from the coal-fired boiler have been correctly and fully monitored, by a responsible official with that official's name, title, and signature, certifying that, to the best of his or her knowledge, the report is true, accurate, and complete. The permittee shall submit such a compliance certification statement in support of each quarterly report. [40 CFR 63.10031(a)(5)(iii)(E)]
- i) The permittee shall submit semiannual compliance reports according to the following: [40 CFR 63.10031(b)]
 - The first compliance report shall cover the period beginning on the compliance date that is specified in 40 CFR 63.9984 (or, if applicable, the extended compliance date approved under 40 CFR 63.6(i)(4)) and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the permittee in 40 CFR 63.9984 (or, if applicable, the extended compliance date approved under 40 CFR 63.6(i)(4)); [40 CFR 63.10031(b)(1)]
 - 2) The first compliance report shall be submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified in 40 CFR 63.9984 (or, if applicable, the extended compliance date approved under 40 CFR 63.6(i)(4)); [40 CFR 63.10031(b)(2)]

- Each subsequent compliance report shall cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31; [40 CFR 63.10031(b)(3)]
- 4) Each subsequent compliance report shall be submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period; [40 CFR 63.10031(b)(4)]
- 5) For each affected source that is subject to permitting regulations pursuant to 40 CFR 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), through the reporting period that ends December 31, 2023, the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of 40 CFR 63.10031; and [40 CFR 63.10031(b)(5)]
- 6) The final semiannual compliance report shall cover the reporting period from July 1, 2023 through December 31, 2023. Quarterly compliance reports shall be submitted thereafter, in accordance with 40 CFR 63.10031(g), starting with a report covering the first calendar quarter of 2024. [40 CFR 63.10031(b)(6)]
- j) The semiannual compliance report shall contain the following information: [40 CFR 63.10031(c)]
 - The information required by the summary report located in 40 CFR 63.10(e)(3)(vi); [40 CFR 63.10031(c)(1)]
 - 2) The total fuel use by Emission Unit 01 (W1) for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure; [40 CFR 63.10031(c)(2)]
 - 3) Indicate whether the permittee burned new types of fuel during the reporting period. If the permittee did burn new types of fuel, the permittee shall include the date of the performance test where that fuel was in use. [40 CFR 63.10031(c)(3)]
 - 4) Include the date of the most recent tune-up in regards to the performance tune-up requirement according to 40 CFR 63.10021(e). The date of the tune-up is the date the tune-up provisions specified in 40 CFR 63.10021(e)(6) and (7) were completed; [40 CFR 63.10031(c)(4)]
 - 5) Should the permittee rely on paragraph (2) of the definition of "startup" in 40 CFR 63.10042, for each instance of startup or shutdown, the permittee shall include the maximum clean fuel storage capacity and the maximum hourly heat input that can be provided for each clean fuel determined according to the requirements of 40 CFR 63.10032(f) and include the information required to be monitored, collected, or recorded according to the requirements of 40 CFR 63.10031(c)(5)]
 - 6) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during the test, if applicable; [40 CFR 63.10031(c)(7)]
 - 7) A certification; [40 CFR 63.10031(c)(8)]

- 8) If there is a deviation from any emission limit, work practice standard, or operating limit, a brief description of the deviation, duration of the deviation, emissions point identification, and the cause of the deviation shall be submitted; and [40 CFR 63.10031(c)(9)]
- 9) If any process or control equipment had malfunction(s) during the reporting period, the permittee shall include the number, duration, and a brief description for each type of malfunction that occurred during the semiannual reporting period, which caused or may have caused any applicable emission limitation to be exceeded. [40 CFR 63.10031(c)(10)]
- k) The semiannual compliance reports described in 40 CFR 63.10031(c) shall include the excess emissions and monitor downtime summary report described in 40 CFR 63.10(e)(3)(vi). However, starting with the first calendar quarter of 2024, reporting of the information under 40 CFR 63.10(e)(3)(vi) (and under 40 CFR 63.10(e)(3)(v), if the applicable excess emissions and/or monitor downtime threshold is exceeded) is discontinued for all CMS, and the permittee shall, instead, include in the quarterly compliance reports described in 40 CFR 63.10031(g) the applicable data elements in Section 13 of Appendix E to 40 CFR 63, Subpart UUUUU for any "deviation" (as defined in 40 CFR 63.10042 and elsewhere in 40 CFR 63, Subpart UUUUU) that occurred during the calendar quarter. If there were no deviations, the permittee shall include a statement to that effect in the quarterly compliance report. [40 CFR 63.10031(d)].
- 1) The permittee shall report all deviations as defined in 40 CFR 63, Subpart UUUUU in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If the permittee submits a semiannual compliance report pursuant to 40 CFR 63.10031(c) and (d), or two quarterly compliance reports covering the appropriate calendar half pursuant to 40 CFR 63.10031(g), along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report(s) includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in 40 CFR 63, Subpart UUUUU, submission of the compliance report(s) satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of the compliance report(s) does not otherwise affect any obligation the permittee may have to report deviations from permit requirements to the permit authority. [40 CFR 63.10031(e)]
- m) The permittee shall report each instance in which the permittee did not meet an applicable emissions limit or operating limit in Table 1 through 4 of 40 CFR 63, Subpart UUUUU or failed to conduct a required tune-up. These instances are deviations from the requirements of 40 CFR 63, Subpart UUUUU and shall be reported according to 40 CFR 63.10031. [40 CFR 63.10021(g)]
- n) The permittee shall submit all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6) and 40 CFR 63.9(b) through (h) that apply. [40 CFR 63.10030(a)]
- o) The permittee shall submit Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin. [40 CFR 63.10030(d)]

- p) Starting with a report for the first calendar quart of 2024, the permittee shall use the ECMPS Client Tool to submit quarterly electronic compliance reports. Each quarterly compliance report shall include the applicable data elements in Section 2 through 13 of Appendix E to 40 CFR 63, Subpart UUUUU. For each stack test summarized in the compliance report, the permittee shall also submit the applicable reference method information in Section 17 through 31 of Appendix E to 40 CFR 63, Subpart UUUUU. The compliance reports and associated Appendix E information shall be submitted no later than 60 days after the end of each calendar quarter. [40 CFR 63.10031(g)]
- q) For each performance stack test completed prior to January 1, 2024, the permittee shall submit a PDF test report in accordance with 40 CFR 63.10031(f)(6), no later than 60 days after the date on which the testing is completed. For each test completed on or after January 1, 2024, in accordance with 40 CFR 63.10031(g), submit the applicable reference method information in Sections 17 through 31 of Appendix E to 40 CFR 63, Subpart UUUUU along with the quarterly compliance report for the calendar quarter in which the test was completed. [40 CFR 63.10031(f)]
 - 1) For each relative accuracy test audit (RATA) of an Hg, HCl, HF, or SO₂ monitoring system completed prior to January 1, 2024, and for each PM CEMS correlation test, each relative response audit (RRA) and each response correlation audit (RCA) of a PM CEMS completed prior to that date, the permittee shall submit a PDF test report in accordance with 40 CFR 63.10031(f)(6), no later than 60 days after the date on which the test is completed. For each SO₂ or Hg RATA completed on or after January 1, 2024, the permittee shall submit the applicable reference method information in Sections 17 through 31 of Appendix E to 40 CFR 63, Subpart UUUUU prior to or concurrent with the relevant quarterly emissions report. For HCl or HF RATAs, and for correlations tests, RRAs, and RCAs of PM CEMS that are completed on or after January 1, 2024, submit the Appendix E reference method information together with the summarized electronic test results, in accordance with 40 CFR 63, Subpart UUUUU, Section 11.4 of Appendix B or Section 7.2.4 of Appendix C, as applicable. [40 CFR 63.10031(f)(1)]
 - 2) The permittee shall submit quarterly PDF reports in accordance with 40 CFR 63.10031(f)(6), which include all of the 30-boiler operating day rolling average emission rates derived from the CEMS data. The quarterly reports are due within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st. Submission of these quarterly reports in PDF files shall end with the report that covers the fourth calendar quarter of 2023. Beginning with the first calendar quarter of 2024, the compliance averages shall no longer be reported separately, but shall be incorporated into the quarterly compliance reports described in 40 CFR 63.10031(g). In addition to the compliance averages for PM CEMS and HAP metals CEMS, the quarterly compliance reports described in 40 CFR 63.10031(g) shall also include the 30-boiler operating day rolling average emission rates for Hg, HCl, HF, and/or SO2 if elected (or required) to continuously monitor these pollutants. Further, if the EGU is an averaging plan, the quarterly compliance reports shall identify all of the EGUs in the plan and shall include all of the 30-group boiler operating day rolling weighted average emission rate (WAERs) for the averaging group. [40 CFR 63.10031(f)(2)]

- 3) The permittee shall submit semiannual compliance reports as required under 40 CFR 63.10031(b) through (d), ending with a report covering the semiannual period from July 1 through December 31, 2023 as PDF files. Quarterly compliance reports shall be submitted in XML format thereafter, in accordance with 40 CFR 63.10031(g), starting with a report covering the first calendar quarter of 2024. [40 CFR 63.10031(f)(4)]
- 4) All reports required by 40 CFR 63, Subpart UUUUU not subject to the requirements in 40 CFR 63.10031(f) introductory text and 40 CFR 63.10031(f)(1) through (4) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the permittee, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.10031(f) introductory text and 40 CFR 63.10031(f)(1) through (4) in paper format. [40 CFR 63.10031(f)(5)]
- 5) All reports and notifications described in 40 CFR 63.10031(f) introductory text, 40 CFR 63.10031(f)(1), (2), and (4) shall be submitted to the EPA in the specified format and at the specified frequency, using the ECMPS Client Tool. Each PDF version of a stack test report, CEMS RATA report, PM CEMS correlation test report, RRA report, and RCA report shall include sufficient information to assess compliance and to demonstrate that the reference method testing was done properly. Note that EPA will continue to accept, as necessary, PDF reports that are being phased out at the end of 2023, if the submission deadlines for those reports extend beyond December 31, 2023. The following data elements shall be entered into the ECMPS Client Tool at the time of submission of each PDF file: [40 CFR 63.10031(f)(6)]
 - i) The facility name, physical address, mailing address (if different from the physical address), and county; [40 CFR 63.10031(f)(6)(i)]
 - ii) The ORIS code (or equivalent ID number assigned by EPA's Clean Air Markets Division (CAMD) and the Facility Registry System (FRS) ID; [40 CFR 63.10031(f)(6)(ii)]
 - iii) The EGU to which the report applies. Report the EGU IDs as they appear in the CAMD Business System; [40 CFR 63.10031(f)(6)(iii)]
 - iv) The identification of each emission point to which the report applies. An "emission point" is a point at which source effluent is released to the atmosphere. To identify an emission point, associate it with the EGU or stack ID in the CAMD Business system or the electronic monitoring plan (e.g., "Unit 1 stack"); [40 CFR 63.10031(f)(6)(vi)]
 - v) An indication of the type of PDF report or notification being submitted; [40 CFR 63.10031(f)(6)(vii)]
 - vi) The pollutant(s) being addressed in the report; [40 CFR 63.10031(f)(6)(viii)]
 - vii) The reporting period being covered by the report (if applicable); [40 CFR 63.10031(f)(6)(ix)]
 - viii) The relevant test method that was performed for a performance test (if applicable); [40 CFR 63.10031(f)(6)(x)]
 - ix) The date the performance test was completed (if applicable) and the test number (if applicable); and [40 CFR 63.10031(f)(6)(xi)]
 - x) The responsible official's name, title, and phone number. [40 CFR 63.10031(f)(6)(xii)]

r) The permittee shall provide reports concerning activities and startup periods, as specified in 40 CFR 63.10011(g), 40 CFR 63.10021(i) and 40 CFR 63.10031. If the permittee elects to use paragraph (2) of the definition of startup in 40 CFR 63.10042, the permittee shall report the applicable information in 40 CFR 63.10031(c)(5) concerning startup periods as follows: For startup periods that occur on or prior to December 31, 2023, in PDF files in the semiannual compliance report; for startup periods that occur on or after January 1, 2024, quarterly, in PDF files, according to 40 CFR 63.10031(i). [40 CFR 63.10031(i) and 40 CFR 63, Subpart UUUUU, Table 3, Item 3.d.]

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The electrostatic precipitator (ESP), wet flue gas desulfurization unit (WFGD), low NO_x burner system, and selective catalytic reduction (SCR) system shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices. [401 KAR 50:055]
- b) Records regarding the maintenance of the control equipment shall be maintained. [40 CFR 63.10032 and 401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for additional requirements.

Emission Unit 2a:

Coal Conveying and Handling

Description:

Construction Commenced: December 1978 Maximum Operating Rate: 3,600 tons/hr

Emission Unit	Description	Control Device	Efficiency	Control Installation Date
EU2a-01	Coal Barge Unloader	DMLV45/15 Type F DMLV30/10 Type F		2011
EU2a-02	Transfer Tower 10			
EU2a-03	Transfer Tower 7A	CPV-4 Power Core		
EU2a-04	Transfer Tower 7B		99.9%	
EU2a-05	Transfer Tower 7C		99.9%	2010
EU2a-06	Transfer Tower 7D	CPV-6 Power Core		2010
EU2a-07	Transfer Tower 8			
EU2a-08	Sample Tower	CPV-12 Power Core		
EU2a-09	Coal Crusher	CPV-4 Power Core		
EU2a-10	Tripper Transfer Tower	Fabric Filter	99.8%	1978
EU2a-11	Coal Railcar/Truck Unloader	CPC-12 Power Core	99.9%	2010

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

401 KAR 60:005, Section 2(2)(gg), 40 CFR 60.250 through 60.258 (Subpart Y), Standards of Performance for Coal Preparation and Processing Plants
40 CFR 52.21, Prevention of Significant Deterioration of Air Quality

1. **Operating Limitations:**

N/A

2. Emission Limitations:

a) The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater. [401 KAR 59:010, Section 3(1)(a) and 40 CFR 60.254(a)]

Compliance Demonstration:

See 3. <u>Testing Requirements</u> b), 4. <u>Specific Monitoring Requirements</u> a), and 5. <u>Specific Recordkeeping Requirements</u> a).

b) PM emissions from any stack shall not exceed the following: [401 KAR 59:010, Section 3(2) referencing Appendix A]

P = Process Weight Rate	E = Maximum Allowable
(tons/hr)	Emission Rate (lb/hr)
$P \le 0.50$	E = 2.34
$0.50 < P \le 30.00$	$E = 3.59P^{0.62}$
P > 30.00	$E = 17.31P^{0.16}$

Compliance Demonstration:

See 4. <u>Specific Monitoring Requirements</u> b) and 5. <u>Specific Recordkeeping</u> <u>Requirements</u> b).

3. <u>Testing Requirements:</u>

- a) Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1 and 401 KAR 59:005, Section 2(1)]
- b) The permittee shall conduct at least one U.S. EPA Reference Method 9 evaluation on each emission point stack, each calendar quarter, to demonstrate compliance with the particulate standard. [401 KAR 52:020, Section 10]
- c) The permittee shall conduct all performance tests required by 40 CFR 60.8 to demonstrate compliance with the applicable emission standards using the methods identified in 40 CFR 60.257. [40 CFR 60.255(a)]

4. <u>Specific Monitoring Requirements:</u>

- a) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than each week while the affected facilities are operating. If visible emission from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using U.S. EPA Reference Method 9, the permittee shall immediately perform a corrective action that results in no visible emissions (not including condensed water in the plume). [401 KAR 52:020, Section 10]
- b) The permittee shall monitor the hours of operation and the amount of coal received and processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]

5. <u>Specific Recordkeeping Requirements:</u>

- a) A log of the qualitative visual observations shall be made as specified in 4. <u>Specific</u> <u>Monitoring Requirements</u> a), including the date, time, initials of observer, whether any emissions were observed (yes/no), and any U.S. EPA Reference Method 9 readings taken. [401 KAR 52:020, Section 10]
- b) The permittee shall maintain records of the hours of operation and the amount of coal received and processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]

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

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

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The dust collector equipment shall be maintained and operated in accordance with manufacturer's specifications and standard operating practices to ensure the emission units comply with applicable requirements. [401 KAR 50:055, Section 2(1)(c) and 401 KAR 52:020, Section 10]
- b) The permittee shall maintain records regarding the monitoring and maintenance of the control equipment. [401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for additional requirements.

Emission Unit 2b: Limestone Material Handling

Description:

Construction Commenced: December 1978 Maximum Operating Rate: 1.000 tons/hr

Emission Unit	Description	Control Device	Efficiency	Installation Date
EU2b-01	Lime Barge Unloader	DMLV45/15 Type F DMLV30/10 Type F		2011
EU2b-02	Transfer Tower 10		-	
EU2b-03	Transfer Tower 7A	CPV-4 Power Core		
EU2b-04	Transfer Tower 7B		99.9%	2010
EU2b-05	Transfer Tower 7C			2010
EU2b-06	Transfer Tower 7D	CPV-6 Power Core		
EU2b-07	Transfer Tower 7E			
EU2b-08	Limestone Silos (4)	CPC-4 Power Core		2011

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations
40 CFR 52.21, Prevention of Significant Deterioration of Air Quality
40 CFR Part 64, Compliance Assurance Monitoring (Particulate Matter)

1. **Operating Limitations:**

N/A

2. Emission Limitations:

a) The permittee shall not cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with Emission Unit 2b which is equal to or greater than 20 percent opacity. [401 KAR 59:010, Section 3(1)(a)] *Compliance Demonstration:*

See 3. <u>Testing Requirements</u> b), 4. <u>Specific Monitoring Requirements</u> a), and 5. <u>Specific Recordkeeping Requirements</u> a).

b) PM emissions from any stack shall not exceed the following: [401 KAR 59:010, Section 3(2) referencing Appendix A]

P = Process Weight Rate	E = Maximum Allowable
(tons/hr)	Emission Rate (lb/hr)
P ≤ 0.50	E = 2.34
$0.50 < P \le 30.00$	$E = 3.59P^{0.62}$
P > 30.00	$E = 17.31P^{0.16}$

Compliance Demonstration:

See 4. <u>Specific Monitoring Requirements</u> b) and 5. <u>Specific Recordkeeping</u> <u>Requirements</u> b).

3. <u>Testing Requirements:</u>

- a) Performance tests shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit. [40 CFR 64.4(c)(1)]
- b) Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1 and 401 KAR 59:005, Section 2(1)]
- c) The permittee shall conduct at least one U.S. EPA Reference Method 9 evaluation on each emission point stack, each calendar quarter, to demonstrate compliance with the particulate standard. [401 KAR 52:020, Section 10]

4. Specific Monitoring Requirements:

- a) The permittee shall perform a qualitative visual observation of the opacity of emissions at each stack no less than each day while the affected facilities are operating. If visible emission from the stacks are observed (not including condensed water in the plume), the permittee shall determine the opacity using U.S. EPA Reference Method 9, and an inspection of the control equipment shall be initiated. [40 CFR 64.4(a)(1)]
- b) The permittee shall monitor the hours of operation and the amount of limestone processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- c) To satisfy CAM requirements, opacity shall be used as an indicator of particulate matter emissions. See Table 2 for complying with CAM. [40 CFR 64.6]

CAM Monitoring Approach		Indicator No.1	
I.	Indicator	Visible Emissions	
A.	Measurement Approach	Daily visual observations of the emissions from the control devices shall be performed. U.S. EPA Reference Method 9 shall be performed if visual emissions are observed.	
П.	Indicator Range	An excursion is defined as one six minute average opacity reading collected using U.S. EPA Reference Method 9 that is above 15% opacity. An excursion shall initiate an investigation and corrective action. An exceedance is defined as either (1) 4 excursions in a rolling 3-month period or (2) 3 consecutive weekly excursions. An exceedance triggers the threshold for a Quality Improvement Plan (QIP).	
III.	Performance Criteria		
А.	Data Representativeness	Visual observation logs will be maintained and audited to ensure visual emission readings are conducted.	
В.	Verification of Operational Status	N/A	
C.	QA/QC Practices and Criteria	U.S. EPA Reference Method 9 readings shall be performed by individuals certified in reading U.S. EPA Reference Method 9.	
D.	Monitoring Frequency	Daily visual observations of the stack shall be performed. U.S. EPA Reference Method 9 shall be performed if visual emissions are observed.	

 Table 2 - 40 CFR Part 64 CAM Requirements for Limestone Handling

IV.	Data Collection Procedures	Daily visual observations and U.S. EPA Reference Method 9 readings (if any) shall be kept in a form readily available for inspection.
V.	Averaging Period	U.S. EPA Reference Method 9 readings, if required, shall be reported as 6-minute averages.
VI.	Recordkeeping	Daily visual observations and U.S. EPA Reference Method 9 readings (if any) shall be maintained for a period of 5 years.
VII.	Reporting	The number, the duration, the cause of, and corrective action taken as a result of any excursion or exceedance.

5. Specific Recordkeeping Requirements:

- a) A log of the qualitative visual observations shall be made as specified in 4. <u>Specific</u> <u>Monitoring Requirements</u> a), including the date, time, initials of observer, whether any emissions were observed (yes/no), any U.S. EPA Reference Method 9 readings, and any corrective actions taken. [401 KAR 52:020, Section 10]
- b) The permittee shall maintain records of the hours of operation and the amount of limestone processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]

6. <u>Specific Reporting Requirements:</u> See Section F – Monitoring, Recordkeeping, and Reporting Requirements.

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The dust collector equipment shall be maintained and operated in accordance with manufacturer's specifications and standard operating practices to ensure the emission units comply with applicable requirements. [401 KAR 50:055, Section 2(1)(c) and 401 KAR 52:020, Section 10]
- b) The permittee shall maintain records regarding the monitoring and maintenance of the control equipment. [401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for additional requirements.

Emission Unit 03: Coal & Limestone Haulage and Material Handling (Fugitive Emissions)

Description:

Emission Unit	Description	Maximum Operating Rate (tons/hr, each)	Construction Commenced	Control Equipment	Control Efficiency	
EU03-01	Coal Stockpile			Wet Suppression;		
EU03-02	Unpaved Haul	3600	1978	Water Sprays:	N/A	
	Road	5000	1770	Compaction &		
EU03-03	Paved Haul Road			Telescopic Chutes		
EU03-04	Underground Coal Hopper Transfer Point	3600	1999	Enclosure	70%	
EU03-05	Limestone Truck Unloading					
	New Limestone	1000	2004	Enclosure	70%	
EU03-06	Conveyor					
	Transfer Point					

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions40 CFR 52.21, Prevention of Significant Deterioration of Air Quality

1. **Operating Limitations:**

- a) The permittee shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
 - 1) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - 2) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations;
 - 4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - 5) The maintenance of paved roadways in a clean condition; or
 - 6) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.

- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]
- d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

2. Emission Limitations:

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

- a) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
- b) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

3. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the amount of coal and limestone received and processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- b) The permittee shall monitor the reasonable precautions taken to prevent particulate matter from becoming airborne on a daily basis. [401 KAR 52:020, Section 10]
- c) If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]

5. <u>Specific Recordkeeping Requirements:</u>

a) The permittee shall maintain records of the amount of coal and limestone received and processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]

- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log. [401 KAR 52:020, Section 10]
- c) The permittee shall maintain a log of the following: [401 KAR 52:020, Section 10]
 - 1) Qualitative fugitive emissions observations conducted including the date, time, initials of observer, whether any fugitive dust emissions were observed;
 - 2) Any Reference Method 22 performed and field records identified in Reference Method 22; and
 - 3) Any correction action taken and the results.

6. Specific Reporting Requirements:

See Section F – Monitoring, Recordkeeping, and Reporting Requirements, Conditions 5, 6, 7 and 8.

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The water spray, compaction, and telescopic chutes shall be operated to maintain compliance with the applicable requirements, in accordance with manufacturer's specifications and standard operating practices. [401 KAR 50:055]
- b) Records regarding the maintenance of the control equipment shall be maintained. [401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for further requirements.

Emission Unit 04:

Ash and Sludge Handling Operations

Description:

Emission Unit	Description	Maximum Operating Rate	Construction Commenced	Control Equipment
EU04-01	Flyash Truck Loadout			Process Enclosed
EU04-02	Sludge Conveyor			
EU04-03	Sludge Stockpile	310 tons/hr	December 1978	Inherent Moisture
EU04-04	Sludge Truck Loadout	510 10118/111	December 1978	
EU04-05	Paved Haulroad			Water
EU04-06	Unpaved Haulroad			Suppression

APPLICABLE REGULATIONS:

401 KAR 63:010, *Fugitive emissions* **40 CFR 52.21**, *Prevention of Significant Deterioration of Air Quality*

1. **Operating Limitations:**

- a) The permittee shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
 - 1) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - 2) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations;
 - 4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - 5) The maintenance of paved roadways in a clean condition; or
 - 6) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]

- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]
- d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

2. <u>Emission Limitations:</u>

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

- a) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
- b) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

3. <u>Testing Requirements:</u>

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

4. <u>Specific Monitoring Requirements:</u>

- a) The permittee shall monitor the amount of material processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- b) The permittee shall monitor the reasonable precautions taken to prevent particulate matter from becoming airborne on a daily basis. [401 KAR 52:020, Section 10]
- c) If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]

5. <u>Specific Recordkeeping Requirements:</u>

- a) The permittee shall maintain records of the amount of material processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log. [401 KAR 52:020, Section 10]
- c) The permittee shall maintain a log of the following: [401 KAR 52:020, Section 10]
 - 1) Qualitative fugitive emissions observations conducted including the date, time, initials of observer, whether any fugitive dust emissions were observed;

- 2) Any Reference Method 22 performed and field records identified in Reference Method 22; and
- 3) Any correction action taken and the results.

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

See Section F – Monitoring, Recordkeeping, and Reporting Requirements, Conditions 5, 6, 7, and 8.

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The enclosures shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and standard operating practices. [401 KAR 50:055]
- b) Records regarding maintenance of the control equipment shall be maintained. [401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for further requirements.

Emission Unit 05: Cooling Tower (W61

Description:

Maximum Operating Rate: 10.8 million gallons of cooling water per hour Construction Commenced: December 1978

APPLICABLE REGULATION:

401 KAR 59:010, New process operations

1. **Operating Limitations:**

To preclude applicability of 40 CFR 63, Subpart Q, the permittee shall not use chromiumbased water treatment chemicals in the cooling towers. [40 CFR 63.400(a)]

2. <u>Emission Limitations:</u>

- a) No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any affected facility which is equal to or greater than twenty (20) percent opacity. [401 KAR 59:010, Section 3(1)(a)]
- b) PM emissions shall not exceed the following: [401 KAR 59:010, Section 3(2), referencing Appendix <u>A]</u>

Process Weight Rate, P	Maximum Allowable
(tons/hr)	Emission Rate, E (lb/hr)
$P \le 0.50$	2.34
$0.50 < P \le 30.00$	$E = 3.59P^{0.62}$
P > 30.00	$E = 17.31P^{0.16}$

Compliance Demonstration:

Compliance with the applicable 401 KAR 59:010 opacity and PM emission standards shall be assumed when monthly observations indicate that the processes and controls are operating normally.

3. <u>Testing Requirements:</u>

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

4. Specific Monitoring Requirements:

The permittee shall monitor the cooling water usage rate and the total dissolved solids content of the circulating water on a monthly basis. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the cooling water usage rate and the total dissolved solids content of the circulating water on a monthly basis. [401 KAR 52:020, Section 10]

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

See Section F – Monitoring, Recordkeeping, and Reporting Requirements, Conditions 5, 6, 7, and 8.

Emission Unit 06: Exis

Existing CI Emergency RICE

Description:

Equipment: Fire Pump Engine Fuel: Diesel Maximum Continuous Rating: 380 HP Manufacture Date: 1980

APPLICABLE REGULATION:

401 KAR 63:002, Section 2(4)(eeee), 40 CFR 63.6580 through 63.6675 Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

<u>Note</u>: 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 the following requirements, except during periods of startup:
 - 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;
 - 3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary; and
 - 4) During periods of startup, minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
 - [40 CFR 63.6602, referencing Table 2c and 40 CFR 63.6625(h)]
- b) The permittee shall use diesel fuel that meets the requirements in 40 CFR 1090.305 for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to January 1, 2015, may be used until depleted. [40 CFR 63.6604(b)]
- c) The permittee shall be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63, Subpart ZZZZ that apply at all times. [40 CFR 63.6605(a)]
- d) 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 any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart ZZZZ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information

available to the Administrator 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)]

- e) The permittee shall operate and maintain the stationary RICE 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)(2) and 40 CFR 63.6640(a) referencing Table 6.9.a.i. and ii.]
- f) The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirements in 1. <u>Operating Limitations</u> a)1). The oil analysis shall be performed at the same frequency specified for changing the oil. The analysis program shall at a minimum analyze the following three 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 engine permittee is not required to change the oil. If any of the limits are exceeded, the engine permittee shall change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine permittee shall change the oil within 2 business days or before commencing operation, whichever is later. The analysis program shall be part of the maintenance plan for the engine. [40 CFR 63.6625(i)]
- g) The permittee shall operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in nonemergency situations for 50 hours per year, as described in 40 CFR 63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine and shall meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]
 - 1) There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]
 - 2) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. The emergency stationary RICE 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 the

emergency engine beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2) and f(2)(i)]

3) The emergency stationary RICE 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. 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 supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

2. <u>Emission Limitations:</u> N/A

3. <u>Testing Requirements:</u>

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

4. <u>Specific Monitoring Requirements:</u>

- a) The permittee shall install a non-resettable hour meter if one is not already installed. [40 CFR 63.6625(f)]
- b) The permittee shall monitor the amount of fuel combusted (in gallons) and the hours of operation on a monthly basis. [401 KAR 52:020, Section 10]

5. <u>Specific Recordkeeping Requirements:</u>

- a) If the permittee opts to utilize an oil analysis program in order to extend the specified oil change requirement, the permittee shall maintain records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. [40 CFR 63.6625(i)]
- b) The permittee shall maintain the following records in a form suitable and readily available for expeditious review in hard copy or electronic form for 5 years following the date of each occurrence: [40 CFR 63.6655(a) and 40 CFR 63.6660]
 - A copy of each notification and report that the permittee submitted to comply with 40 CFR 63, Subpart ZZZZ, including all documentation supporting any Notification of Compliance Status submitted according to the requirement in 40 CFR 63.10(b)(2)(xiv). [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)]

- 5) Records required in 1. <u>Operating Limitations</u> d) to show continuous compliance with each emission or operating limitation that applies. [40 CFR 63.6655(d)]
- 6) Records of the maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the maintenance plan. [40 CFR 63.6655(e)(2)]
- 7) 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. [40 CFR 63.6655(f)(1)]
- c) The permittee shall maintain records of the amount of fuel combusted (in gallons) and the hours of operation on a monthly basis. [401 KAR 52:020, Section 10]

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

- a) The permittee shall report each instance in which they did not meet the operating limitations in 40 CFR 63, Subpart ZZZZ, Table 2c. These instances are deviations from the operating limitations and shall be reported according to the requirements in 40 CFR 63.6650. [40 CFR 63.6640(b)]
- b) The permittee shall report each instance in which they did not meet the requirements in 40 CFR 63, Subpart ZZZZ, Table 8. The permittee is not required to submit the notifications in 40 CFR 63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), (g), and (h). [40 CFR 63.6640(e) and 40 CFR 63.6645(a)(5)]
- c) See Section F Monitoring, Recordkeeping, and Reporting Requirements for additional requirements.

Emission Unit 07: Existing CI Emergency RICE

Description:

Equipment: Emergency Generator Fuel: Diesel Maximum Continuous Rating: 1,130 HP Manufacture Date: 1980

APPLICABLE REGULATION:

401 KAR 63:002, Section 2(4)(eeee), 40 CFR 63.6580 through 63.6675 Tables 1a through 8, and Appendix A (**Subpart ZZZZ**), *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

<u>Note</u>: 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:**

The permittee shall operate the emergency stationary RICE according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, 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 63.6640(f)(1) through (4), is prohibited. If the permittee does not operate the engine according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine and shall meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

- a) There is no time limit on the use of emergency stationary RICE in emergency situations. [40 CFR 63.6640(f)(1)]
- b) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. The emergency stationary RICE 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 the emergency engine beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2) and f(2)(i)]
- c) The emergency stationary RICE 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. 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 supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 63.6640(f)(3)]

2. <u>Emission Limitations:</u>

N/A

3. <u>Testing Requirements:</u>

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 monitor the amount of fuel combusted (in gallons) and the hours of operation on a monthly basis. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the amount of fuel combusted (in gallons) and the hours of operation on a monthly basis. [401 KAR 52:020, Section 10]

6. Specific Reporting Requirements:

See Section F – Monitoring, Recordkeeping, and Reporting Requirements for additional requirements.

Emission Unit 08:

Gypsum Handling Operations

Description:

Description	Maximum Operating Rate	Proposed Construction	Control Equipment
Transfer Points			
Storage Pile	55.2 tons/hr	October 2021	Dust Suppression
Transport			

APPLICABLE REGULATION:

401 KAR 63:010, Fugitive emissions

1. **Operating Limitations:**

- a) A person shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
 - 1) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - 2) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations;
 - 4) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - 5) The maintenance of paved roadways in a clean condition; or
 - 6) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]

d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

2. <u>Emission Limitations:</u>

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

- a) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
- b) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

3. <u>Testing Requirements:</u>

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

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the amount of material processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- b) The permittee shall monitor the reasonable precautions taken to prevent particulate matter from becoming airborne on a daily basis. [401 KAR 52:020, Section 10]
- c) If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]

5. <u>Specific Recordkeeping Requirements:</u>

- a) The permittee shall maintain records of the amount of material processed (in tons) on a weekly basis. [401 KAR 52:020, Section 10]
- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log. [401 KAR 52:020, Section 10]
- c) The permittee shall maintain a log of the following: [401 KAR 52:020, Section 10]
 - 1) Qualitative fugitive emissions observations conducted including the date, time, initials of observer, whether any fugitive dust emissions were observed;
 - 2) Any Reference Method 22 performed and field records identified in Reference Method 22; and
 - 3) Any correction action taken and the results.

6. Specific Reporting Requirements:

See Section F – Monitoring, Recordkeeping, and Reporting Requirements, Conditions 5, 6, 7, and 8.

7. <u>Specific Control Equipment Operating Conditions:</u>

- a) The enclosures shall be operated to maintain compliance with applicable requirements, in accordance with manufacturer's specifications and standard operating practices. [401 KAR 50:055]
- b) Records regarding maintenance of the control equipment shall be maintained. [401 KAR 52:020, Section 10]
- c) See Section E Source Control Equipment Requirements for further requirements.

Emission Unit 09: New CI Emergency RICE

Description:

Equipment: FGD Emergency Generator Fuel: Diesel Maximum Continuous Rating: 954 HP Manufacture Date: 2010 Installation Date: 2021

APPLICABLE REGULATIONS:

401 KAR 60:005, Section 2(2)(ddd), 40 CFR 60.4200 to 60.4219, Table 1 to 8 (Subpart IIII), Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

401 KAR 63:002, Section 2(4)(eeee), 40 CFR 63.6580 to 63.6675, Tables 1a to 8, and Appendix A (**Subpart ZZZZ**), National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

<u>Note</u>: 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.

1. **Operating Limitations:**

- a) This engine shall meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII for compression ignition engines. No further requirements under 40 CFR 63, Subpart ZZZZ apply. [40 CFR 63.6590(c)(1)]
- b) The permittee shall use diesel fuel that meets the following requirements: [40 CFR 60.4207(b)]
 - 1) A maximum sulfur content of 15 ppm; and [40 CFR 80.510(b)(1)(i)]
 - 2) A minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 80.510(b)(2)(i) and (ii)]
- c) 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 of 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under 40 CFR 60, Subpart IIII and must meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]
 - There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]

- 2) Emergency stationary ICE may be operated for any combination of the purposes specified in 40 CFR 60.4211(f)(2)(i) through (iii) 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). 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, 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) and 60.4211(f)(2)(i)]
- 3) Emergency stationary ICE may be operated for up to 50 hours per calendar year in nonemergency 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. 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) and 60.4211(f)(3)(i)]
 - i) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [40 CFR 60.4211(f)(3)(i)(A)]
 - ii) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [40 CFR 60.4211(f)(3)(i)(B)]
 - iii) 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)]
 - iv) 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)]
 - v) The permittee identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine permittee. [40 CFR 60.4211(f)(3)(i)(E)]

2. <u>Emission Limitations:</u>

The permittee shall meet the requirements of 40 CFR 89, 94, and/or 1068, as they apply, over the life of the engine. [40 CFR 60.4202(a)(2), 40 CFR 60.4205(b), 40 CFR 60.4206(c), 40 CFR 60.4211(a)(3) and 40 CFR 60.4211(c)]

Compliance Demonstration:

I) The permittee shall meet the requirements of 40 CFR 89, 94, and/or 1068, as they apply, and operate and maintain the engines and control devices according to the manufacturer's

emission-related written instructions, changing only the emission-related settings that are permitted by the manufacturer, except as permitted by 40 CFR 60.4211(g). [40 CFR 60.4211(a)(1) and (2)]

- II) The permittee shall purchase an engine certified to the emission standards in 40 CFR 60.4205(b), as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]
- III) If the permittee does not install, configure, operate, and maintain each engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, see 3. <u>Testing Requirements</u> b) and 5. <u>Specific Recordkeeping Requirements</u> a). [40 CFR 60.4211(g)]

3. <u>Testing Requirements:</u>

- a) If the permittee conducts a performance test pursuant to 40 CFR 60, Subpart IIII, the procedures in 40 CFR 60.4212(a) through (e) shall be followed [40 CFR 60.4212]
- b) The permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the permittee changes emission-related settings in a way that is not permitted by the manufacturer. The permittee shall conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards. [40 CFR 60.4211(g)(3)]
- c) Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 4]

4. Specific Monitoring Requirements:

- a) If the 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)]
- b) The permittee shall monitor the hours of operation and the amount of fuel combusted (in gal) on a monthly basis. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

a) If the permittee does not install, configure, operate, and maintain each engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings 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. [40 CFR 60.4211(g)(3)]

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

- b) If the emergency engine is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or that operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee shall submit an annual report according to the following requirements: [40 CFR 60.4214(d)]
 - 1) The report shall contain the following information: [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 operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii). [40 CFR 60.4214(d)(1)(v)]
 - vi) Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii). [40 CFR 60.4214(d)(1)(vi)]
 - vii) 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 necessitate the dispatch of the engine. [40 CFR 60.4214(d)(1)(vii)]
 - 2) The first annual report shall cover the calendar year 2020 and shall be submitted no later than March 31, 2021. 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 Date 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)]
- c) The permittee shall maintain records of the hours of operation and the amount of fuel combusted (in gal) on a monthly basis. [401 KAR 52:020, Section 10]

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

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

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant, the permittee shall comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

Description	Generally Applicable Regulation
1. Bottom ash handling	401 KAR 63:010
2. Fire pump diesel fuel storage tank (500 gallons)	N/A
3. Diesel fuel storage tank (550 gallons)	N/A
4. Gasoline storage and dispensing tank (2,000 gallons)	N/A
5. Landfill eqpt. diesel fuel storage (2,000 gallons)	N/A
6. Kerosene tank-North (500 gallons)	N/A
7. Kerosene tank-South (500 gallons)	N/A
8. Mobile diesel tank (1,000 gallons)	N/A
9. DBA tank-T1	N/A
10. Sodium sulfite tank-T2	N/A
11. Coal handling diesel fuel storage tank (10,000 gallons)	N/A
12. Diesel fuel storage tanks (2 each 300,000 gallons)	N/A
13. Direct-fired space heater, W64 (propane)	N/A
14. Direct-fired space heater, W65 (propane)	N/A
15. Storage tank for emergency diesel generator (2,000 gallons)	N/A
16. Day tank for diesel generator (55 gallons)	N/A
17. Pressure washer, Maintenance (propane)	GHG Rule
18. Pressure washer, Coal handling (diesel)	GHG Rule
19. Cooling tower water treatment operation	N/A
20. Closed cooling water system	N/A
21. Demineralizer process operation	N/A
22. Freeze protection operation for coal conveyors	N/A
23. Sewage treatment plant operations	N/A
24. Wastewater treatment plant operations	N/A

SECTION C - INSIGNIFICANT ACTIVITIES (CONTINUED)

25. Potable water treatment operations	N/A
26. Pneumatic conveying of fly ash/storage	401 KAR 63:010
27. Dry Sorbent Injection system (DSI)	401 KAR 59:010, Permittee shall monitor the amount of hydrated lime received and processed on a weekly basis.
28. Contractor's mobile diesel tank (100 gallons)	N/A
29. Leachate treatment plant operations	N/A
30. Fly Ash Barge Loading	401 KAR 59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

- 1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
- 2. Particulate matter, sulfur dioxide, nitrogen oxides, and visible (opacity) emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

- 1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a) Date, place as defined in this permit, and time of sampling or measurements;
 - b) Analyses performance dates;
 - c) Company or entity that performed analyses;
 - d) Analytical techniques or methods used;
 - e) Analyses results; and
 - f) Operating conditions during time of sampling or measurement.
- 2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a) Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b) To access and copy any records required by the permit:
 - c) Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

- 4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
- 5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
- 7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a) When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b) When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- 8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
 - a) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
 - b) For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
 - c) All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
- 9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a) Identification of the term or condition;
 - b) Compliance status of each term or condition of the permit;
 - c) Whether compliance was continuous or intermittent;
 - d) The method used for determining the compliance status for the source, currently and over the reporting period.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- e) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- f) The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality Owensboro Regional Office 3032 Alvey Park Dr. W. STE 700 Owensboro, KY 42303-2191 U.S. EPA Region 4 Air Enforcement Branch Atlanta Federal Center 61 Forsyth St. SW Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

1. <u>General Compliance Requirements:</u>

- 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 26].
- b) The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- c) This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - 1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - 2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit shall 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; and
 - 4) New requirements become applicable to a source subject to the Acid Rain Program.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d) The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e) Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

- f) The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g) Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h) The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i) All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j) This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k) Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) b].
- This permit does not convey property rights or exclusive privileges [Section 1a-9 of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
- m) Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n) Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) d.].
- Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) a.].

- 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. <u>Permit Expiration and Reapplication Requirements:</u>

- a) This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
- b) The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3) <u>Permit Revisions:</u>

- a) A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
- b) This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

4. <u>Construction, Start-Up, and Initial Compliance Demonstration Requirements:</u>

Pursuant to a duly submitted application, the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission units 08 and 09 in accordance with the terms and conditions of this permit (V-21-018).

- a) Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b) Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:
 - 1) The date when construction commenced.
 - 2) The date of start-up of the affected facilities listed in this permit.
 - 3) The date when the maximum production rate specified in the permit application was achieved.
- c) Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d) Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall-demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.
- e) This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.
- f) Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

5. <u>Testing Requirements:</u>

- a) Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.
- b) Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- c) Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements:

- a) If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b) The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. <u>Emergency Provisions:</u>

- a) Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - 1) An emergency occurred and the permittee can identify the cause of the emergency;

- 2) The permitted facility was at the time being properly operated;
- 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 224.1-400, 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.
 - 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 82.155.
 - 5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157.
 - 6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b) If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. <u>Risk Management Provisions:</u>

- a) The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.
- b) If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS N/A

SECTION I - COMPLIANCE SCHEDULE N/A

SECTION J - ACID RAIN

1. <u>Statutory and Regulatory Authority:</u>

In accordance with KRS 224.10-100 and Title IV and V of the Clean Air Act, the Kentucky Environmental and Public Protection 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 Part 76, Acid Rain Nitrogen Oxides Emission Reduction Program.

2. <u>Permit Requirements:</u>

This Acid Rain Permit covers Acid Rain Unit 1 (Emission Unit 01) at the Wilson Station (ORIS Code: 6823). Unit 1 is a coal-fired base load electric generating unit. The Acid Rain Permit Application and NO_x Compliance Plan received on December 16, 2020 for Phase II are hereby incorporated into and made part of this permit, and the permittee shall comply with the standard requirements and special provisions set forth in the application. [40 CFR 72.9(a)(2)]

3. Acid Rain Program Emission and Operating Limitations:

The applicable Acid Rain emission limitations for the permittee are as follows: [40 CFR 73.10, Table 2, 40 CFR 76.7, and 40 CFR 76.11]

Affected Unit: Wilson Station Emission Unit 01 (W1)					
Year for SO ₂ Allowances* 2021 2022 2023 2024 2025					
40 CFR Part 73.10	12,487*	12,487*	12,487*	12,487*	12,487*

NO_x Limits and Requirements

Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves the NO_x emissions averaging plan for this unit. This plan is effective for calendar years 2021 through 2025. Under this plan, the unit's NO_x emissions shall not exceed 0.46 lb/MMBtu of heat input on an annual average basis. [40 CFR 76.7(a)(2)]

This unit shall comply with all other applicable requirements of 40 CFR Part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.

^{*} The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR Part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

SECTION K – CLEAN AIR INTERSTATE RULE (CAIR)

1. <u>Statutory and Regulatory Authorities:</u>

In accordance with KRS 224.10-100, the Kentucky Energy and Environmental Cabinet issues this permit pursuant to 401 KAR 52:020, Title V permits, 401 KAR 51:210, CAIR NOx annual trading program, 401 KAR 51:220, CAIR NOx ozone season trading program and 401 KAR 51:230, CAIR SO₂ trading program.

2. Application and Requirements:

The CAIR application for one electrical generating unit was submitted to the Division and received on September 10, 2007. The standard requirements and special provisions set forth in the application are hereby incorporated into and made part of this CAIR Permit. [401 KAR 51:210, 401 KAR 51:220, and 401 KAR 51:230] Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

3. <u>Unit Description:</u>

The affected unit is a dry bottom wall-fired boiler rated at 4,585 MMBtu/hr (EU 01). This unit has a capacity to generate 25 megawatts or more of electricity, which is offered for sale. The unit uses pulverized coal as a fuel source and is authorized as a base load electric generating unit.

4. <u>Summary of Actions:</u>

The CAIR Permit is being issued as part of the Title V permit for this source. Public, affected state, and U.S. EPA review will follow procedures specified in 401 KAR 52:100.

CSAPR implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

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

The CSAPR subject unit, and the unit-specific monitoring provisions at this source, are identified in the following table. The unit is subject to the requirements for the CSAPR NO_x Annual Trading Program, CSAPR NO_x Ozone Season Group 3 Trading Program, and CSAPR SO₂ Group 1 Trading Program

Unit ID: 01, Pulverized coal fired, dry bottom, wall fired boiler						
Parameter	Continuous emission monitoring system or systems (CEMS) requirements pursuant to 40 CFR part 75, subpart B (for SO ₂ monitoring) and 40 CFR part 75, subpart H (for NO _x monitoring)	Excepted monitoring system requirements for 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	Low Mass Emissions excepted monitoring (LME) requirements for gas- and oil- fired units pursuant to 40 CFR 75.19	EPA-approved alternative monitoring system requirements pursuant to 40 CFR part 75, subpart E	
SO_2	Х					
NO _x	Х					
Heat input	Х					

- 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 NO_x Annual Trading Program), 40 CFR 97.1030 through 40 CFR 97.1035 (CSAPR NO_x Ozone Season Group 3 Trading Program), and 401 KAR 51:260 Section 3(25) through 401 KAR 51:260, Section 3(30) (CSAPR SO₂ 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 shall 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: http://www.epa.gov/airmarkets.
- 3. Owners and operators that want to use an alternative monitoring system shall submit to the Administrator a petition requesting approval of the alternative monitoring system in accordance with 40 CFR 75, Subpart E, 40 CFR 75.66, 401 KAR 51:240, Section 3(30) (CSAPR NO_X Annual Trading Program), 40 CFR 97.1035 (CSAPR NO_X

Ozone Season Group 3 Trading Program), and/or 401 KAR 51:260, Section 3(30) (CSAPR SO₂ 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/part-75-petition-responses.

- 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 NO_x Annual Trading Program), 40 CFR 97.1030 through 40 CFR 97.1034 (CSAPR NO_x Ozone Season Group 3 Trading Program), and/or 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(29) (CSAPR SO₂ 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), 40 CFR 97.1035 (CSAPR SO₂ Group 1 Trading Program), and 401 KAR 51:260, Section 3(30) (CSAPR NO_x Ozone Season Group 3 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 https://www.epa.gov/airmarkets/data-resources.
- 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 NO_x Annual Trading Program), 40 CFR 97.1030 through 40 CFR 97.1034 (CSAPR NO_x Ozone Season Group 3 Trading Program), and 401 KAR 51:260, Section 3(25) through 401 KAR 51:260, Section 3(29) (CSAPR SO₂ 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_X 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.
 - The owners and operators, and the designated representative, of each CSAPR NO_x Annual source and each CSAPR NO_x 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 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(26) (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 NOx 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 NOx

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_x emissions requirements.

- 1) CSAPR NO_x 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_x Annual source and each CSAPR NO_x Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_x 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_x emissions for such control period from all CSAPR NO_x Annual units at the source.
 - ii) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Annual units at a CSAPR NO_x Annual source are in excess of the CSAPR NO_x Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:
 - A) The owners and operators of the source and each CSAPR NO_x Annual unit at the source shall hold the CSAPR NO_x 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_x 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 (40 CFR 97, Subpart AAAAA) and the Clean Air Act.
- 2) CSAPR NO_x Annual assurance provisions.
 - i) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Annual units at CSAPR NO_x 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_x 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 NOx 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 two 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 NO_x 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_x emissions exceeds the respective common designated representative's assurance level; and (B) The amount by which total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state for such control period exceed the state assurance level.

- ii) The owners and operators shall hold the CSAPR NO_x 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_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the State during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state NO_x 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, 40 CFR 97, Subpart AAAAA, or of the Clean Air Act if total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x 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_x emissions from the CSAPR NO_x Annual units at CSAPR NO_x 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_x Annual 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_x 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, 40 CFR 97, Subpart AAAAA, and the Clean Air Act.
- 3) Compliance periods.
 - A CSAPR NO_x 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_x 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 NO_x 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 NO_x Annual allowance that was allocated for such control period or a control period in a prior year.
 - ii) A CSAPR NO_x 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_x 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_x 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_x Annual allowance is a limited authorization to emit one ton of NO_x during the control period in one 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_x Annual Trading Program; and
 - 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_x 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_x 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.

- Unless otherwise provided, the owners and operators of each CSAPR NO_x Annual source and each CSAPR NO_x 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_x 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_x Annual Trading Program.
- 2) The designated representative of a CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall make all submissions required under the CSAPR NO_x 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_x Annual Trading Program that applies to a CSAPR NO_x Annual source or the designated representative of a CSAPR NO_x Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_x Annual units at the source.
- 2) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual unit or the designated representative of a CSAPR NO_x Annual unit shall also apply to the owners and operators of such unit.

g) Effect on other authorities.

No provision of the CSAPR NO_x 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_x Annual source or CSAPR NO_x Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

CSAPR NOx Ozone Season Group 3 Trading Program Requirements (40 CFR 97.1006)

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 40 CFR 97.1013 through 40 CFR 97.1018.

b) Emissions monitoring, reporting, and recordkeeping requirements.

- The owners and operators, and the designated representative, of each CSAPR NO_x Ozone Season Group 3 source and each CSAPR NO_x Ozone Season Group 3 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.1030 through 40 CFR 97.1035.
- 2) The emissions data determined in accordance with 40 CFR 97.1030 through 40 CFR 97.1035 shall be used to calculate allocations of CSAPR NO_x Ozone Season Group 3 allowances under 40 CFR 97.1011(a)(2) and (b) and 40 CFR 97.1012 and to determine compliance with the CSAPR NO_x Ozone Season Group 3 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 40 CFR 97.1030 through 40 CFR 97.1035 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c) NO_x emissions requirements.

- 1) CSAPR NO_x Ozone Season Group 3 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_x Ozone Season Group 3 source and each CSAPR NO_x Ozone Season Group 3 unit at the source shall hold, in the source's compliance account, CSAPR NO_x Ozone Season Group 3 allowances available for deduction for such control period under 40 CFR 97.1024(a) in an amount not less than the tons of total NO_x emissions for such control period from all CSAPR NO_x Ozone Season Group 3 units at the source.
 - ii) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Ozone Season Group 3 units at a CSAPR NO_x Ozone Season Group 3 source are in

excess of the CSAPR NO_x Ozone Season Group 3 emissions limitation set forth in paragraph (c)(1)(i) above, then:

- A) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 3 unit at the source shall hold the CSAPR NO_x Ozone Season Group 3 allowances required for deduction under 40 CFR 97.1024(d); and
- B) The owners and operators of the source and each CSAPR NO_x Ozone Season Group 3 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 40 CFR 97, Subpart GGGGG, and the Clean Air Act.
- 2) CSAPR NO_x Ozone Season Group 3 assurance provisions.
 - i) If total NO_x emissions during a control period in a given year from all base CSAPR NO_x Ozone Season Group 3 units at CSAPR NO_x Ozone Season Group 3 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_x 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_x Ozone Season Group 3 allowances available for deduction for such control period under 40 CFR 97.1025(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.1025(b, of multiplying—
 - A) The quotient of the amount by which the common designated representative's share of such NO_x 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_x emissions exceeds the respective common designated representative's assurance level; and
 - B) The amount by which total NO_x emissions from all base CSAPR NO_x Ozone Season Group 3 units at base CSAPR NO_x Ozone Season Group 3 sources in the state for such control period exceed the state assurance level.
 - ii) The owners and operators shall hold the CSAPR NO_x Ozone Season Group 3 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 the year of such control period.
 - iii) Total NO_x emissions from all CSAPR NO_x Ozone Season Group 3 units at CSAPR NO_x Ozone Season Group 3 sources in the state during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the State NO_x Ozone Season Group 3 trading budget under 40 CFR 97.1010(a), the state's variability limit under 40 CFR 97.1010(b), and, for the control period in 2021 only, the product (rounded to the nearest allowance) of 1.21 multiplied by the supplemental amount of CSAPR NO_x Ozone Season Group 3 allowances determined for the state under 40 CFR 97.1010(d).
 - iv) It shall not be a violation of 40 CFR 97, Subpart GGGGG, or of the Clean Air Act if total NO_x emissions from all base CSAPR NO_x Ozone Season Group 3 units at base CSAPR NO_x Ozone Season Group 3 sources in the state during a control period exceed

the state assurance level or if a common designated representative's share of total NO_x emissions from the base CSAPR NO_x Ozone Season Group 3 units at base CSAPR NO_x Ozone Season Group 3 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_x Ozone Season Group 3 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_x Ozone Season Group 3 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 40 CFR 97, Subpart GGGGG and the Clean Air Act.
- 3) Compliance periods.
 - i) A CSAPR NO_x Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(1) above for the control period starting on the later of May 1, 2021 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.1030(b) and for each control period thereafter.
 - ii) A base CSAPR NO_x Ozone Season Group 3 unit shall be subject to the requirements under paragraph (c)(2) above for the control period starting on the later of May 1, 2021 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.1030(b) and for each control period thereafter.
- 4) Vintage of CSAPR NO_x Ozone Season Group 3 allowances held for compliance.
 - i) A CSAPR NO_x Ozone Season Group 3 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_x Ozone Season Group 3 allowance that was allocated or auctioned for such control period or a control period in a prior year.
 - ii) A CSAPR NO_x Ozone Season Group 3 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_x Ozone Season Group 3 allowance that was allocated or auctioned 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_x Ozone Season Group 3 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR 97, Subpart GGGGG.
- 6) Limited authorization. A CSAPR NO_x Ozone Season Group 3 allowance is a limited authorization to emit one ton of NO_x during the control period in one 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_x Ozone Season Group 3 Trading Program; and
 - ii) Notwithstanding any other provision of 40 CFR 97, Subpart GGGGG, 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_x Ozone Season Group 3 allowance does not constitute a property right.

d) Title V permit requirements.

- No Title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_x Ozone Season Group 3 allowances in accordance with 40 CFR 97, Subpart GGGGG.
- 2) A description of whether a unit is required to monitor and report NO_x emissions using a continuous emission monitoring system (pursuant to 40 CFR 75, Subpart 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), or an alternative monitoring system (pursuant to 40 CFR 75, Subpart E) in accordance with 40 CFR 97.1030 through 40 CFR 97.1035 may be added to, or changed in, this Title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 40 CFR 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 71.7(e)(1)(i)(B).

e) Additional recordkeeping and reporting requirements.

- Unless otherwise provided, the owners and operators of each CSAPR NO_x Ozone Season Group 3 source and each CSAPR NO_x Ozone Season Group 3 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 40 CFR 97.1016 for the designated representative for the source and each CSAPR NO_x Ozone Season Group 3 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 40 CFR 97.1016 changing the designated representative.
 - ii) All emissions monitoring information, in accordance with 40 CFR 97, Subpart GGGGGG.
 - 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_x Ozone Season Group 3 Trading Program.
- 2) The designated representative of a CSAPR NO_x Ozone Season Group 3 source and each CSAPR NO_x Ozone Season Group 3 unit at the source shall make all submissions required under the CSAPR NO_x Ozone Season Group 3 Trading Program, except as provided in 40 CFR 97.1018. 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 Parts 70 and 71.

f) Liability.

 Any provision of the CSAPR NO_x Ozone Season Group 3 Trading Program that applies to a CSAPR NO_x Ozone Season Group 3 source or the designated representative of a CSAPR NO_x Ozone Season Group 3 source shall also apply to the owners and operators of such source and of the CSAPR NO_x Ozone Season Group 3 units at the source.

2) Any provision of the CSAPR NO_x Ozone Season Group 3 Trading Program that applies to a CSAPR NO_x Ozone Season Group 3 unit or the designated representative of a CSAPR NO_x Ozone Season Group 3 unit shall also apply to the owners and operators of such unit.

g) Effect on other authorities.

No provision of the CSAPR NO_x Ozone Season Group 3 Trading Program or exemption under 40 CFR 97.1005 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_x Ozone Season Group 3 source or CSAPR NO_x Ozone Season Group 3 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 SO₂ Group 1 Trading Program requirements (401 KAR 51:260, 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 51:260, Section 3(10) through 401 KAR 51:260, Section 3(15).

b) Emissions monitoring, reporting, and recordkeeping requirements.

- The owners and operators, and the designated representative, of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall comply with the monitoring, 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(26) (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 SO₂ 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 SO₂ 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) SO₂ emissions requirements.

- 1) CSAPR SO₂ 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 SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO₂ 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 SO₂ emissions for such control period from all CSAPR SO₂ Group 1 units at the source.

- ii) If total SO₂ emissions during a control period in a given year from the CSAPR SO₂ Group 1 units at a CSAPR SO₂ Group 1 source are in excess of the CSAPR SO₂ Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
 - A) The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall hold the CSAPR SO₂ 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 SO₂ 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 excess emissions and each day of such control period shall constitute a separate violation 401 KAR 51:260, 40 CFR 97, Subpart CCCCC, and the Clean Air Act.
- 2) CSAPR SO₂ Group 1 assurance provisions.
 - i) If total SO₂ emissions during a control period in a given year from all CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ 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 SO₂ 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 two 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 SO₂ 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 SO₂ emissions exceeds the respective common designated representative's assurance level; and
 - B) The amount by which total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state for such control period exceed the state assurance level.
 - ii) The owners and operators shall hold the CSAPR SO₂ 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 SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO₂ emissions exceed the sum, for such control period, of the state SO₂ 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, 40 CFR 97, Subpart CCCCC, or of the Clean Air Act if total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ emissions from the

CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ 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 SO₂ 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, 40 CFR 97, Subpart CCCCC and the Clean Air Act.
- 3) Compliance periods.
 - i) A CSAPR SO₂ 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 SO₂ 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 SO₂ 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 SO₂ Group 1 allowance that was allocated for such control period or a control period in a prior year.
 - ii) A CSAPR SO₂ 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 SO₂ 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 SO₂ 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.
- 6) Limited authorization. CSAPR SO₂ Group 1 allowance is a limited authorization to emit one ton of SO₂ during the control period in one year. Such authorization is limited in its use and duration as follows:
 - i) Such authorization shall only be used in accordance with the CSAPR SO₂ 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 SO₂ 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 SO₂ 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 SO₂ Group 1 source and each CSAPR SO₂ 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 SO₂ 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 representation under 40 CFR 97.616 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 SO₂ Group 1 Trading Program.
- 2) The designated representative of a CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall make all submissions required under the CSAPR SO₂ 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 SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 source or the designated representative of a CSAPR SO₂ Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO₂ Group 1 units at the source.
- Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 unit or the designated representative of a CSAPR SO₂ Group 1 unit shall also apply to the owners and operators of such unit.

g) Effect on other authorities.

No provision of the CSAPR SO₂ 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 SO₂ Group 1 source or CSAPR SO₂ 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.

Appendix G-7

TVA – Shawnee <u>DRAFT</u> Permit

For Reference Only

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

Draft

AIR QUALITY PERMIT Issued under 401 KAR 52:020

Permittee Name: Mailing Address:	Tennessee Valley Authority (TVA) 1101 Market Street, Chattanooga, TN 37402-2801
Source Name: Mailing Address:	TVA - Shawnee Fossil Plant (SHF) 7900 Metropolis Lake Road, Highway 996 West Paducah, KY 42086-9414
Source Location:	7900 Metropolis Lake Road, Highway 996 West Paducah, KY 42086-9414
Permit: Agency Interest: Activity: Review Type: Source ID:	V-23-006 3073 APE20220006, APE20220009 and APE20230003 Title V, Construction / Operating 21-145-00006
Regional Office: County:	Paducah Regional Office 130 Eagle Nest Drive Paducah, KY 42003 (270) 898-8468 McCracken
Application Complete Date: Issuance Date: Expiration Date:	November 22, 2023

For Michael J. Kennedy, P.E. Director Division for Air Quality

Version 4/1/2022

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Permit	Permit Type	Activity#	Complete Date	Issuance Date	Summary of Action
V-23-006	Minor Revision	APE20220006			Adding SCR on the 7 boilers - 2,3,5,6,7,8 and 9
	Renewal	APE20220009	11/22/2023		Renewal with removal of emission units and changes to Insignification Activities
	Sig Revision	APE20230003	11/22/2023		Implement an emissions limits of 8,208 tpy of SO ₂ based on a 12-month rolling total, effective 1/1/2028

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 was 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.

Emission Units: EU 1 through EU 9 - Nine Indirect Heat Exchangers

Description:

Emis	Emission Unit					
KY	Fac	, v	Constructed:	Manufacturer Description:		Fuel Information
EIS	EU	EP				
001	1		4/1953			• Primary fuel: pulverized
002	2		6/1953		NT as identical	coal, including Rocky Mountain bituminous
003	3	1	10/1953		 Nine identical pulverized coal, dry- bottom wall fired 	and Powder River Basin sub-bituminous coals
004	4		1/1954	bottom, wall-fired units (low NO _x burners);	units (low NO _x • Secondary fit	• Secondary fuel: Less than 5% of the boiler's
005	5		10/1954	Babcock & Wilcox Co.	• 1,691 MMBtu/hour	heat input - nonhazardous waste
006	6		11/1954	• Two main stacks		materials such as used oil with less than 50
007	7	2	12/1954		separate bypass stack for each baghouse	ppm PCB. Less than 3% of the boiler's heat input
008	8	2	3/1955		tor each baghouse	 clean wood; No. 2 fuel oil used for
009	9		7/1955			startup and stabilization

Control Equipment Summary						
Emission Unit KY EIS Facility		Device:	Pollutants:	Emissions Monitoring:		
All	All	Mercury Mitigation System	Hg	Hg CEMS		
001, 004	1, 4	Spray Dry Absorber (SDA) Systems (Calcium Hydroxide)	SO ₂ , H ₂ SO ₄ , HCl	Constructed 2015-2017; SO ₂ CEMS		
001, 004	1, 4	Selective Catalytic Reduction (SCR) Reactors		Constructed 2015-2017; NO _x CEMS		
002 - 003 005 - 009	$2-3 \\ 5-9$	Selective Catalytic Reduction (SCR) Reactors [2,3,7,8 (two by May 2024, one by Summer & one by Fall of 2024)]	(SCR) Reactors 8 (two by May 2024, one by			
001 - 009	1 – 9	Bagfilters	РМ	99% efficiency; PM CEMS; Quarterly Testing		
002 - 003 005 - 009	$2-3 \\ 5-9$	Hydrated Lime Injection	Acid Gases (e.g. HCl, HF, etc.)	HCl Quarterly Testing		

Applicable Regulations:

401 KAR 51:160, NOx requirements for large utility and industrial boilers
401 KAR 51:210, CAIR NOx Annual Trading Program
401 KAR 51:220, CAIR NOx ozone season trading program
401 KAR 51:230, CAIR SO2 Trading Program

401 KAR 52:060, Acid rain permits

401 KAR 61:015, *Existing indirect heat exchangers*

401 KAR 63:002, Section 2(4)(yyyy), 40 CFR 63.9980 through 63.10042, Tables 1 to 9, and Appendices A to B (Subpart UUUUU), *National Emission Standards for Hazardous Air Pollutants: Coal and Oil-fired Electric Utility Steam Generating Units*

40 CFR 64, *Compliance Assurance Monitoring (CAM) applies to PM for these units;*

40 CFR 97, Subpart AAAAA, CSAPR NO_x Annual Trading Program;

40 CFR 97, Subpart BBBBB, CSAPR NO_x Ozone Season Trading Program;

40 CFR 97, Subpart CCCCC, *CSAPR* SO₂ *Trading Program*;

40 CFR 97, Subpart EEEEE, CSAPR NOx Ozone Season Group 2 Trading Program

ADDITIONAL REQUIREMENTS:

Federal Facilities Compliance Agreement filed on April 14, 2011, between the United States Environmental Protection Agency and the Tennessee Valley Authority, Docket No. CAA-04-2010-1760 ("Compliance Agreement")

Consent Decree filed on June 30, 2011, between the State of Alabama and the Alabama Department of Environmental Management, Commonwealth of Kentucky, State of North Carolina *ex rel*. Attorney General Roy Cooper, and State of Tennessee (*Plaintiffs*) and the Tennessee Valley Authority, Civil Action No. 3:11-cv-00170 (*lead case*); and National Parks Conservation Association, Inc., Sierra Club, and Our Children's Earth Foundation (*Plaintiffs*) and the Tennessee Valley Authority, Civil Action No. 3:11-cv-00171 (*consolidated case*)

1. **Operating Limitations**:

a) The permittee chooses to comply using paragraph (1) of the definition of "startup" in 40 CFR 63.10042 (The first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on-site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup), the permittee shall operate all Continuous Monitoring System(s) (CMS) during startup. For startup of a unit, the permittee shall use clean fuels as defined in 40 CFR 63.10042 for ignition. Once the permittee converts to firing coal, residual oil, or solid oil-derived fuel, the permittee shall engage all of the applicable control technologies except dry scrubber and SCR. The permittee shall start the dry scrubber and SCR systems, if present, appropriately to comply with relevant standards applicable during normal operation. The permittee shall comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in 40 CFR 63, Subpart UUUUU. The permittee shall maintain records during startup periods. The permittee shall provide reports concerning activities and startup periods, as specified in 40 CFR 63.10011(g) and 40 CFR 63.10021(h) and (i).

Compliance Demonstration Method:

See 1. <u>Operating Limitations</u>: (g) and (h), 4. <u>Specific Monitoring Requirements</u>: (l), and 5. <u>Specific Recordkeeping Requirements</u>: (p), (s), and (u).

b) The permittee shall operate all CMS during shutdown. The permittee shall also collect appropriate data, and the permittee shall calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used. While firing coal,

residual oil, or solid oil-derived fuel during shutdown, the permittee shall vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal, residual oil, or solid oil-derived fuel being fed into the EGU and for as long as possible thereafter considering operational and safety concerns. In any case, the permittee shall operate the controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than 40 CFR 63, Subpart UUUUU and that require operation of the control devices. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel must be one or a combination of the clean fuels defined in 40 CFR 63.10042 and must be used to the maximum extent possible, taking into account considerations such as not compromising boiler or control device integrity. Shutdown means (the period in which cessation of operation of an EGU is initiated for any purpose. Shutdown begins when the EGU no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the EGU, whichever is earlier. Shutdown ends when the EGU no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the EGU. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown). The permittee shall comply with all applicable emission limits at all times except during startup periods and shutdown periods, as specified in 40 CFR 63.10020(a). The permittee shall maintain records during shutdown periods as provided in 40 CFR 63.10032 and 40 CFR 63.10021(h). Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown. The permittee shall provide reports concerning shutdown periods, as specified in 40 CFR 63.10011(g), 40 CFR 63.10021(i), and 40 CFR 63.10031 [40 CFR 63.10000(a), 40 CFR 63.10005(j), 40 CFR 63.10042 "Shutdown", & 40 CFR 63, Subpart UUUUU – Table 3 – Item 4].

Compliance Demonstration Method:

See 1. <u>Operating Limitations</u>: (h), and 5. <u>Specific Recordkeeping Requirements</u>: (p), (s), and (u).

c) The permittee shall comply with all applicable emission limits under 40 CFR 63, Subpart UUUUU at all times (See 2. <u>Emission Limitations</u>: (a)(ii), (d), and (e), except during startup periods and shutdown periods, however the permittee is required to meet work practice requirements specified in items 3 and 4, in Table 3 of 40 CFR 63, Subpart UUUUU during startup and shutdown periods (1. <u>Operating Limitations</u>: (a) and (b)) [40 CFR 63.10000(a)].

Compliance Demonstration Method:

See 5. <u>Specific Recordkeeping Requirements</u>: (I) through (p), (s), and (u).

- d) The permittee shall conduct periodic performance tune-ups for each EGU, as specified in 40 CFR 63.10021(e)(1) through (9). Subsequently, the permittee shall perform an inspection of the burner at least once every 36 calendar months. If an EGU is offline when a deadline to perform the tune-up passes, the permittee shall perform the tune-up work practice requirements within 30 days after the re-start of the affected unit [40 CFR 63.10021(e)].
 - i) As applicable, the permittee shall inspect the burner and combustion controls, and clean or replace any components of the burner or combustion controls as necessary

upon initiation of the work practice program and at least once every required inspection period. Repair of a burner or combustion control component requiring special order parts may be scheduled as follows [40 CFR 63.10021(e)(1)]:

- A) Burner or combustion control component parts needing replacement that affect the ability to optimize NO_x and CO shall be installed within three calendar months after the burner inspection[40 CFR 63.10021(e)(1)(i)];
- B) Burner or combustion control component parts that do not affect the ability to optimize NO_x and CO may be installed on a schedule determined by the operator [40 CFR 63:10021(e)(1)(ii)].
- ii) As applicable, the permittee shall inspect the flame pattern and make any adjustments to the burner or combustion controls necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available, or in accordance with best combustion engineering practice for that burner type [40 CFR 63.10021(e)(2)];
- iii) As applicable, the permittee shall observe the damper operations as a function of mill and/or cyclone loadings, cyclone and pulverizer coal feeder loadings, or other pulverizer and coal mill performance parameters, making adjustments and effecting repair to dampers, controls, mills, pulverizers, cyclones, and sensors [40 CFR 63.10021(e)(3)];
- iv) As applicable, the permittee shall evaluate windbox pressures and air proportions, making adjustments and effecting repair to dampers, actuators, controls, and sensors [40 CFR 63.10021(e)(4)];
- v) The permittee shall inspect the system controlling the air-to-fuel ratio and ensure that it is correctly calibrated and functioning properly. Such inspection may include calibrating excess O_2 probes and/or sensor, adjusting overfire air systems, changing software parameters, and calibrating associated actuators and dampers to ensure that the systems are operated as designed. Any component out of calibration, in or near failure, or in a state that is likely to negate combustion optimization efforts prior to the next tune-up, should be corrected or repaired as necessary [40 CFR 63.10021(e)(5)];
- vi) The permittee shall optimize combustion to minimize generation of CO and NO_x. The optimization should be consistent with the manufacturer's specification, if available, or best combustion engineering practice for the applicable burner type. NO_x optimization includes burners, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting combustion zone temperature profiles, and add-on controls such as SCR and SNCR; CO optimization includes burner, overfire air controls, concentric firing system improvements, neural network or combustion efficiency software, control systems calibrations, adjusting calibrations, and adjusting combustion zone temperature profiles. [40 CFR 63.10021(e)(6)];
- vii) While operating at full load or the predominantly operated load, the permittee shall measure the concentration in the effluent stream of CO and NO_x in ppm, by volume, and oxygen in volume percent, before and after the tune-up adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). The permittee may use portable CO, NO_x and O₂ monitors for this measurement. EGU's employing neural network optimization systems need only provide a single pre- and post-tune-up value rather

than continual values before and after each optimization adjustment made by the system[40 CFR 63.10021(e)(7)];

- viii) The permittee shall maintain on-site and submit, if requested by the Administrator, an annual report containing the information specified here-in including [40 CFR 63.10021(e)(8)];
 - A) The concentrations of CO and NO_x in the effluent stream in ppm by volume, and oxygen in volume percent, measured before and after an adjustment of the EGU combustion systems [40 CFR 63.10021(e)(8)(i)];
 - B) A description of any corrective actions taken as a part of the combustion adjustment [40 CFR 63.10021(e)(8)(ii)]; and
 - C) The type(s) and amount(s) of fuel used over the 12 calendar months prior to an adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period [40 CFR 63.10021(e)(8)(iii)]; and
- ix) The permittee shall report the dates of the initial and subsequent tune-ups in hard copy, as specified in 40 CFR 63.10031(f)(5), until April 16, 2017. After April 16, 2017, report the date of all tune-ups electronically, in accordance with 40 CFR 63.10031(f). The tune-up report date is the date when tune-up requirements in 40 CFR 63.10021(e)(6) and (7)) are completed. [40 CFR 63.10021(e)(9)]

Compliance Demonstration Method:

See 5. <u>Recordkeeping Requirements</u>: (j) and (t).

- e) If the permittee elects to (or is required to) use CEMS to continuously monitor Hg, HCl, HF, SO₂, or PM emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg emissions data), the following default values are available for use in the emission rate calculations during startup periods or shutdown periods (as defined in 40 CFR 63.10042). For the purposes of 40 CFR 63, Subpart UUUUU, these default values are not considered to be substitute data.
 - i) *Diluent cap values.* If the permittee uses CEMS (or, if applicable, sorbent trap monitoring systems) to comply with a heat input-based emission rate limit, the permittee may use the following diluent cap values for a startup or shutdown hour in which the measured CO_2 concentration is below the cap value or the measured O_2 concentration is above the cap value. The permittee may use 5% for CO_2 or 14% for O_2 .
 - ii) Default gross output. If the permittee uses CEMS to continuously monitor Hg, HCl, HF, SO₂, or PM emissions (or, if applicable, sorbent trap monitoring systems to continuously collect Hg emissions data), the following default value is available for use in the emission rate calculations during startup periods or shutdown periods (as defined in 40 CFR 63.10042). For the purposes of 40 CFR 63, Subpart UUUUU, this default value is not considered to be substitute data. For a startup or shutdown hour in which there is heat input to an affected EGU but zero gross output, the permittee shall calculate the pollutant emission rate using a value equivalent to 5% of the maximum sustainable gross output, expressed in megawatts, as defined in 40 CFR 75, Appendix A, section 6.5.2.1(a)(1). This default gross output is either the nameplate capacity of the EGU or the highest gross output observed in at least four representative quarters of EGU operation. For a monitored common stack, the default gross output is used only when all EGUs are operating (*i.e.*, combusting fuel) are in startup or shutdown mode, and have zero electrical generation. Under those conditions, a default gross

output equal to 5% of the combined maximum sustainable gross output of the EGUs that are operating but have a total of zero gross output must be used to calculate the hourly gross output-based pollutant emissions rate.

- f) The permittee shall comply with the applicable General Provisions in 40 CFR 63.1 through 40 CFR 63.15 that are provided in Table 9 of 40 CFR 63, Subpart UUUUU [40 CFR 63.10040].
- g) The permittee shall operate, calibrate, and maintain records of the indicative CEMS according the manufacturer's specification and by adhering to the applicable provisions of 40 CFR 75, excluding the installation location requirement of 40 CFR 75, Appendix A, 1.2.1 [401 KAR 52:020, Section 10].
- h) During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 61:015, Section 9. The permittee shall meet the work practice standards established in 40 C.F.R. Part 63, Table 3 to Subpart UUUU, as established in 401 KAR 63:002, Section 2(4)(yyyy). [401 KAR 61:015, Section 9(2)(b)]

2. <u>Emission Limitations</u>:

- a) Particulate matter emissions shall not exceed:
 - i) 0.11 lb/MMBtu for each unit, based on a 3-hour block average [401 KAR 61:015, Section 4(1)].

Compliance Demonstration Method:

See 3. <u>Testing Requirements</u>: (a), and 4. <u>Monitoring Requirements</u>: (a) and (b). The permittee shall demonstrate compliance with 2. <u>Emission Limitations</u>: (a)(i) by demonstrating compliance with 2. <u>Emission Limitations</u>: (a)(ii). The permittee shall demonstrate compliance with the 0.030 lb/MMBtu with PM CEMS as required in 4. <u>Monitoring Requirements</u>: (a).

ii) 0.030 lb/MMBtu based on the appropriate requirements in Table 2 and Table 5 of 40 CFR 63, Subpart UUUUU, or a 30-boiler operating day rolling average if CEMS is used to demonstrate continuous compliance with the filterable PM limit [40 CFR 63.9991(a), Table 2, Item 1.a, and 40CFR 63.10005(a) and 63.10006(c), Table 5, Item 1].

<u>Compliance Demonstration Method</u>: See 3. <u>Testing Requirements</u>: (d) and (g) through (k).

- b) Emissions shall not exceed 20 percent opacity based on a 6-minute average for each unit except that [401 KAR 61:015, Section 4(2)]:
 - i) A maximum of 40 percent opacity shall be permissible for not more than one 6minute period in any 60-consecutive minutes.
 - ii) Emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

Compliance Demonstration Method:

The permittee shall demonstrate compliance with the opacity limit by demonstrating compliance with **4**. <u>Specific Monitoring Requirements</u>: (b).

c) Sulfur dioxide emissions shall not exceed 1.2 lbs/MMBtu based on a 24-hour average for each unit [401 KAR 61:015, Section 5(1) and paragraph 91 of CAA-04-2010-1760].

<u>Compliance Demonstration Method</u>: See **4. Specific Monitoring Requirements:** (a) and (e).

d) For hydrogen chloride (HCl), emissions shall not exceed 2.0E-3 lb/MMBtu based on the appropriate requirements in Table 2 of 40 CFR 63, Subpart UUUUU or a 30-boiler operating day rolling average if CEMS is used to demonstrate continuous compliance [40 CFR 63.9991(a) and Table 2, Item 1.b.].

Compliance Demonstration Method:

See 3. <u>Testing Requirements</u>: (e) and (g) through (k).

e) For mercury (Hg), emissions shall not exceed 1.2 lb/TBtu based on calculating the 30boiler operating day rolling arithmetic average emissions rate in units of the applicable emissions standard basis at the end of each boiler operating day using all of the quality assured hourly average CEMS data for the previous 30-boiler operating days, excluding data recorded during periods of startup or shut down [40 CFR 63.9991(a), Table 2, Item 1.c.].

Compliance Demonstration Method:

See 3. <u>Testing Requirements</u>: (f) and (g) through (k), 4. <u>Monitoring Requirements</u>: (g).

f) The permittee shall not allow the increase in Sulfuric Acid Mist (SAM/H₂SO₄ and SO₃) emissions from Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from the completion of SCR and SDA installation for each projects to equal or exceed 7 tons per year (exceed the significant emission rate defined in 401 KAR 51:001, Section 1 (218)(a)), based on a 12-month rolling total.

Compliance Demonstration Method:

The permittee shall demonstrate that SAM emissions from Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from installation for each projects do not exceed the baseline emission rate, calculated using the appropriate emission factor determined by **3.** <u>Testing Requirements</u>: (I), plus 6.9 tons per year.

i) For the Baseline SAM Test, the permittee shall establish the SAM emission factor in lb/MMBtu for Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from installation projects' completion. The following equation shall be used to establish the SAM baseline emissions for each project:

$$\begin{bmatrix} 1 \end{bmatrix} SAM_{BL} = \sum_{i=1}^{n} \begin{bmatrix} HI_{24 \text{ month } i} \left(\frac{MMBTU}{24 \text{ Month}} \right) \times SAM_{EF_{i}} \left(\frac{lb}{MMBtu} \right) \times \frac{1}{2000} \left(\frac{ton}{lb} \right) \\ \times \frac{1}{2} \left(\frac{24 \text{ Month}}{years} \right) \end{bmatrix}$$

Where:

 SAM_{BL} = SAM baseline actual emissions [401 KAR 51:001, Section 1(20)] $HI_{24 month_i}$ = Total Heat Input (MMBtu) for one emission unit during the selected 24-month period for unit *i*.

- $SAM_{EF_i} = SAM$ emission factor (lb/MMBtu) determined from the initial performance test in 3. <u>Testing Requirements</u>: (l) for unit *i*.
- ii) The permittee shall determine the ratio of SAM to SO_2 for Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006], resulting from each installation projects' completion, during the tests following the installation and operation of the SCR and SDA as follows:

$$Ratio\left(\frac{SAM}{SO_2}\right) = \frac{C_{SAM}}{C_{SO_2}}$$

Where:

 C_i = concentration of pollutant *i* (mass/volume)

iii) The permittee shall calculate the 12-month rolling total SAM emissions for Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from installation for each projects according to the following equation:

$$[2] SAM_{12 month} = \sum \left[SO_{2_{CEMS_i}} \left(\frac{tons}{12 month total} \right) \times Ratio_i \left(\frac{SAM}{SO_2} \right) \right]$$

Where:

SAM_{12 month} = SAM 12-month rolling total (tons) for Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from installation for each projects

 $SO_{2_{CEMS_i}} = SO_2$ mass emission rate determined by Indicative CEMS for unit *i*.

iv) The permittee shall demonstrate that the 12-month rolling total SAM emissions for Units 1 and 4 [APE20150003] and Units 2, 3, 5, 6, 7, 8, 9 [APE20220006] resulting from installation for each projects do not equal or exceed the baseline emissions plus 6.9 tons per year according to the following equation:

$$SAM_{12 month} \le 6.9 \frac{ton}{yr} + SAM_{BL}$$

g) Beginning January 1, 2028, total SO₂ emissions from Units 1 through 9 shall not exceed 8,208 tons per year on a 12-month rolling total basis. The first month of the initial 12month compliance period shall be January 2028. The last month of the initial 12-month compliance period shall be December 2028. [Regional Haze]

Compliance Demonstration Method:

Compliance shall be determined using continuous emission monitoring systems (CEMS) for SO₂ that have been installed, certified, operated, and maintained according to 40 CFR Part 75, along with the following requirements:

- i) Each compliance period shall include only "valid operating hours" (i.e., operating hours for which valid data are obtained for all the parameters used to determine hours SO₂ mass emission). Operating hours shall be excluded if either:
 - A) The substitute data provisions of Part 75 are applied for any of the parameters used to determine the hourly SO₂ mass emissions; or
 - B) An exceedance of the full-scale range of a monitoring system occurs for any of the parameters used to determine the hourly SO₂ mass emissions; and

- i) Only unadjusted, quality-assured values for all the parameters used to determine hourly SO_2 mass emissions shall be used in the emissions calculations; and
- ii) The total SO_2 mass emissions shall be calculated for the initial and each subsequent 12-month rolling total compliance periods by summing the valid hourly SO_2 mass emissions values for all the valid operating hours in the compliance period for both common stacks.

3. <u>Testing Requirements:</u>

- a) Pursuant to the Compliance Agreement (paragraph 105), beginning in calendar year 2011, and continuing in each calendar year thereafter, the permittee shall conduct a performance test for filterable particulate matter on the common stacks for EU 1-5 and EU 6-9 for emission units 1-9, according to 40 CFR 60, Appendix A, Method 5, 5B, or 17, or an alternative method approved by EPA.
- b) The permittee shall determine opacity by performing a U.S. EPA Reference Method 9 observation. If a required U.S. EPA Reference Method 9 cannot be performed, the permittee shall record which requirement(s) for performing U.S. EPA Reference Method 9 listed in 40 CFR 60, Appendix A cannot be satisfied, and shall conduct the observation as soon as all the requirements can be met [401 KAR 52:020, Section 10].
- c) Pursuant to 401 KAR 50:045, Performance Tests, Section 5. Test Conditions:
 - i) In order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. The Division for Air Quality may waive this requirement on a case-by-case basis if the source demonstrates to the cabinet's satisfaction that the source is in compliance with all applicable requirements [401 KAR 50:045, Section 5(1)].
 - ii) If the maximum production rate represents a source's highest emission 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. [401 KAR 50:045, Section 5(2)].
 - iii) A source that becomes capable of operating at a higher production rate than the production rate than the production rate demonstrated during a prior performance test shall conduct anther performance test at the higher rate to demonstrate the source's ability to comply with emissions limitations [401 KAR 50:045, Section 5(3)].
- d) Since the coal-fired EGUs have not qualified as LEEs for filterable PM, after April 15, 2017, the permittee shall demonstrate compliance through initial and periodic quarterly performance stack test for PM according to Table 5 and 40 CFR 63.10007, except as otherwise provided in 40 CFR 63.10021(d)(1), [40 CFR 63.10000(c)(1)(iv), 40 CFR 63.10006(c) and 40 CFR 63.10011(a)].
- e) Since the coal-fired EGUs have not qualified as LEEs for HCl, the permittee shall demonstrate initial and continuous compliance by conducting initial and periodic quarterly performance stack test for HCl according to Table 5 and 40 CFR 63.10007, except as otherwise provided in 40 CFR 63.10021(d)(1) [40 CFR 63.10000(c)(1)(v), 40 CFR 63.10006(d), and 40 CFR 63.10011(a)].
- f) Since the coal-fired EGUs have not qualified as LEEs for Hg, the permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent

trap monitoring system, in accordance with appendix A of 40 CFR 63, Subpart UUUUU [40 CFR 63.10000(c)(1)(vi) and 40 CFR 63.10011(c)(1)].

- g) For complying with emission standards under 40 CFR 63, Subpart UUUUU, the permittee may skip performance testing in those quarters during which less than 168 boiler operating hours occur, except that a performance test shall be conducted at least once every calendar year [40 CFR 63.10021(d)(1)].
- h) The permittee shall conduct all required performance tests according to 40 CFR 63.7(d), (e), (f), and (h). The permittee shall also develop a site-specific test plan according to the requirements in 40 CFR 63.7(c) [40 CFR 63.10007(a)].
 - i) For Hg CEMS, to determine compliance with a 30-boiler operating day rolling average emission limit, permittee must collect quality-assured CEMS data for all unit operating conditions, including startup and shutdown (see 40 CFR 63.10011(g) and Table 3 of 40 CFR 63, Subpart UUUUU), except as otherwise provided in 40 CFR 63.10020(b). Emission rates determined during startup periods and shutdown periods as defined in 40 CFR 63.10042 are not to be included in the compliance determinations, except as otherwise provided in 40 CFR 63.10000(c)(1)(vi)(B) and 40 CFR 63.10005(a)(2)(iii) [40 CFR 63.10007(a)(1)].
 - ii) For PM and HCl performance testing, maximum normal operating load will be generally between 90 and 110 percent of design capacity but should be representative of site specific normal operations during each test run [40 CFR 63.10007(a)(2)].
- i) The permittee shall conduct each performance test, including traditional 3-run stack tests, 30-boiler operating day tests based on CEMS data according to the requirements in Table 5 of 40 CFR 63, Subpart UUUUU [40 CFR 63.10007(b)].
- j) The permittee shall conduct a minimum of three separate test runs for each performance tests, as specified in 40 CFR 63.7(e)(3). Each test run shall comply with the minimum applicable sampling time or volume specified in Table 2 of 40 CFR 63, Subpart UUUUU [40 CFR 63.10007(d)].
- k) The permittee shall complete performance tests for the EGU at least 45 calendar days, measured from the test's end date, shall separate performance tests conducted every quarter. For units demonstrating compliance through quarterly emission testing, the permittee shall conduct a performance test in the 4th quarter of a calendar year if the EGU has skipped performance tests in the first 3 quarters of the calendar year. If the EGU misses a performance test deadline due to being inoperative and if 168 or more boiler operating hours occur in the next test period, the permittee shall complete an additional performance test in that period as follows [40 CFR 63.10006(f)]:
 - i) At least 15 calendar days shall separate two performance tests conducted in the same quarter [40 CFR 63.10006(f)(1)];
 - ii) At least 107 calendar days shall separate two performance tests conducted in the same calendar year [40 CFR 63.10006(f)(2)]; and
 - iii) At least 350 calendar days shall separate two performance tests conducted in the same 3 year period [40 CFR 63.10006(f)(3)].
- The permittee shall conduct a performance test prior to the operation of the SCR and the SDA for Units 1 through 9 for SO₃ and SAM (H₂SO₄ including SO₃). The test shall be conducted while combusting coal representative of the baseline period and shall determine the baseline of SAM [401 KAR 50:045].

m) The permittee shall conduct a performance test within 30 days after the operation of the SCR and the SDA for Units 1 through 9 for SO₃ and SAM (H₂SO₄ including SO₃) and to correlate these findings to the SO₂ CEMS installed in the ductwork prior to the merged stacks (indicative CEMS). The permittee shall also calibrate the indicative CEMS during the test and shall operate and maintain the indicative CEMS according to the manufacturer's specifications. The permittee shall not exceed 110% of the average percent sulfur in Units 1 through 9 during the test. The permittee shall monitor and maintain records of ammonia injection rate and hydrated lime injection rate. The permittee shall conduct additional tests every 5 years [preclude 401 KAR 51:017].

4. <u>Specific Monitoring Requirements</u>:

- a) Continuous emission monitoring (CEM) systems shall be installed, calibrated, maintained, and operated for measuring particulate matter emissions, nitrogen oxides emissions, sulfur dioxide emissions and carbon dioxide emissions [401 KAR 61:005, Section 3, Performance Specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A, and 401 KAR 52:020, Section 10]. Excluding the startup and shutdown periods, if any 24-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and the CEM system and make any necessary repairs as soon as practicable [401 KAR 52:020, Section 10].
- b) To assure compliance with the PM emission limits for Emission Units 1 through 9 when using the common stack the permittee shall:
 - i) Install, calibrate, maintain and operate a PM CEMS according to Performance Specification 11 in Appendix B to 40 CFR 60 and the EPA approved plan for installation and correlation of the PM CEMS and the Quality Assurance/Quality Control protocol [paragraph 111 of CAA-04-2010-1760];
 - ii) The PM CEMS data shall be continuously monitored and recorded to determine hourly average PM emissions. The hourly average PM emissions shall be used to determine the 24-hour rolling average PM emission rate; [paragraph 111 of CAA-04-2010-1760] and
 - iii) An excursion is defined as any 24-hour rolling average PM emission rate that exceeds the PM emission indicator (0.030 lb/MMBtu) [40 CFR 64.6(c)]. Within 24 hours of an excursion, take corrective action and perform a U.S. EPA Reference Method 9 according to 3. Testing Requirements: (b).
 - iv) The pressure drop across baghouses, fan amperage and inlet temperature of the baghouses will be monitored and compared to the manufacturer's recommended operating range listed in 4. <u>Specific Monitoring Requirements</u>: (b)(vi). Once any of these parameters fall outside the recommended operating range, the permittee shall immediately initiate an investigation of the fabric filters to determine the cause and make any necessary repairs or take corrective actions in the most expedient manner possible [40 CFR 64.6(c)].
 - v) If the 24-hour rolling average measured by the PM CEMS exceeds 0.030 lb/MMBtu for more than 5% of the operating time in a calendar quarter the permittee shall develop a Quality Improvement Plan (QIP) that meets the requirements of 40 CFR 64.8, and submit it to the Kentucky Division for Air Quality's Permit Review Branch for approval within 30 days of the last day in the calendar quarter [40 CFR 64.6(c)].
 - vi) The permittee shall monitor the following parameters and take corrective action as specified in **4**. <u>Specific Monitoring Requirements</u>: (b)(iv):

Parameter:	Design Limit:	Alarm Set Point:
Pressure Drop	Less than 11 inches H ₂ O	10" H ₂ 0
Fan Amperage (Amps)	Less than 300 Amps	257 Amps and every 5 Amps above 257
Inlet Temperature	Less than 425°F	400°F

- c) The rate of each fuel burned shall be measured daily or at shorter intervals and recorded. The heating value, sulfur content and ash content of fuels shall be ascertained at least once per week and recorded. The permittee may use the certification from the fuel supplier to satisfy this requirement. Where the indirect heat exchanger is used to generate electricity, the average electrical output, and the minimum and maximum hourly generation rate shall be measured and recorded daily [401 KAR 61:015, Section 6(3)].
- d) The Division may provide a temporary exemption from the monitoring and reporting requirements of 401 KAR 61:005, Section 3, for the continuous monitoring system during any period of monitoring system malfunction, provided that the source owner or operator shows, to the Division's satisfaction, that the malfunction was unavoidable and is being repaired as expeditiously as practicable [401 KAR 61:005, Section 3(4)].
- e) The permittee shall monitor and calculate sulfur dioxide, nitrogen oxide and carbon dioxide emissions on a calendar year basis as measured by the continuous emissions monitor (CEM) [40 CFR 75.2(a)].
- f) The permittee shall monitor the duration of start-ups and shutdowns [401 KAR 52:020, Section 10].
- g) CEMS for measuring mercury emissions shall be installed, certified, maintained, operated, and quality-assured according to Appendix A of 40 CFR 63, Subpart UUUUUU.[40 CFR 63.10000(c)(1)(vi)] I
- h) If the permittee demonstrates compliance with any applicable emissions limit through use of a continuous monitoring system (CMS) where a CMS includes a continuous parameter monitoring system (CPMS) as well as a continuous emissions monitoring system (CEMS), the permittee shall develop a site-specific monitoring plan and submit this site-specific monitoring plan, if requested, at least 60 days before the initial performance evaluation (where applicable) of the CMS. This requirement also applies to the permittee if the permittee petitions the Administrator for alternative monitoring parameters under 40 CFR 63.8(f). This requirement to develop and submit a site-specific monitoring plan does not apply to affected sources with existing monitoring plans that apply to CEMS and CPMS prepared under Appendix B to 40 CFR 60 or 40 CFR 63.8(f)(4), the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified, if approved, include those in the site-specific monitoring plan [40 CFR 63.10000(d)(1)].
 - i) The site-specific monitoring plan shall include the information specified in 40 CFR 63.10000(d)(5)(i) through (d)(5)(vii). Alternatively, the requirements of 40 CFR

63.10000(d)(5)(i) through (d)(5)(vii) are considered to be met for a particular CMS or sorbent trap monitoring system if [40 CFR 63.10000(d)(2)]:

- A) The CMS or sorbent trap monitoring system is installed, certified, maintained, operated, and quality-assured either according to 40 CFR 75, or appendix A or B of 40 CFR 63, Subpart UUUUU [40 CFR 63.10000(d)(2)(i)]; and
- B) The recordkeeping and reporting requirements of 40 CFR 75, or appendix A or B of 40 CFR 63, Subpart UUUUU, that pertain to CMS are met [40 CFR 63.10000(d)(2)(ii)].
- ii) If requested by the Administrator, the permittee shall submit the monitoring plan (or relevant portion of the plan) at least 60 days before the initial performance evaluation of a particular CMS, except where the CMS has already undergone a performance evaluation that meets the requirements of 40 CFR 63.10010 (e.g., if the CMS was previously certified under another program) [40 CFR 63.10000(d)(3)].
- iii) The permittee shall operate and maintain the CMS according to the site-specific monitoring plan [40 CFR 63.10000(d)(4)].
- iv) The provisions of the site-specific monitoring plan shall address the following items [40 CFR 63.10000(d)(5)]:
 - A) Installation of the CMS or sorbent trap monitoring system sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device). See 40 CFR 63.10010(a) for further details. For PM CPMS installations, follow the procedures in 40 CFR 63.10010(h) [40 CFR 63.10000(d)(5)(i)];
 - B) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems [40 CFR 63.10000(d)(5)(ii)];
 - C) Schedule for conducting initial and periodic performance evaluations [40 CFR 63.10000(d)(5)(iii)];
 - D) Performance evaluation procedures and acceptance criteria (e.g., calibrations), including the quality control program in accordance with the general requirements of 40 CFR 63.8(d) [40 CFR 63.10000(d)(5)(iv)];
 - E) On-going operation and maintenance procedures, in accordance with the general requirements of 40 CFR 63.8(c)(1)(ii), (c)(3), and (c)(4)(ii) [40 CFR 63.10000(d)(5)(v)];
 - F) Conditions that define a CMS that is out of control consistent with 40 CFR 63.8(c)(7)(i) and for responding to out of control periods consistent with 40 CFR 63.8(c)(7)(ii) and (c)(8) [40 CFR 63.10000(d)(5)(vi)];
 - G) On-going recordkeeping and reporting procedures, in accordance with the general requirements of 40 CFR 63.10(c), (e)(1), and (e)(2)(i), or as specifically required under 40 CFR 63, Subpart UUUUU [40 CFR 63.10000(d)(5)(vii)].
- i) The permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods (see 40 CFR 63.8(c)(7)), and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable [40 CFR

63.10020(b)].

- j) The permittee shall not use data recorded during EGU startup or shutdown in calculations used to report emissions. In addition, data recorded during monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, or required monitoring system quality assurance or control activities may not be used in calculations used to report emissions or operating levels. The permittee shall use all of the qualityassured data collected during all other periods in assessing the operation of the control device and associated control system [40 CFR 63.10020(c)].
- k) Except for periods of monitoring system malfunctions or monitoring system out-ofcontrol periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activates including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation from the monitoring requirements [40 CFR 63.10020(d)].
- If the permittee chooses to rely on the second definition of "startup" (1. <u>Operating</u> <u>Limitations</u>: (a)(ii)), the permittee shall:
 - i) During each period of startup, record for each EGU [40 CFR 63.10020(e)(1)]:
 - A) The date and time that clean fuels being combusted for the purpose of startup begins [40 CFR 63.10020(e)(1)(i)];
 - B) The quantity and heat input of clean fuel for each hour of startup [40 CFR 63.10020(e)(1)(ii)];
 - C) The gross output for each hour of startup [40 CFR 63.10020(e)(1)(iii)];
 - D) The date and time that non-clean fuel combustion begins [40 CFR 63.10020(e)(1)(iv)]; and
 - E) The date and time that clean fuels being combusted for the purpose of startup ends [40 CFR 63.10020(e)(1)(v)].
 - ii) During each period of shutdown, record for each EGU [40 CFR 63.10020(e)(2)]:
 - A) The date and time that clean fuels being combusted for the purpose of shutdown begins [40 CFR 63.10020(e)(2)(i)];
 - B) The quantity and heat input of clean fuel for each hour of shutdown [40 CFR 63.10020(e)(2)(ii)];
 - C) The gross output for each hour of shutdown [40 CFR 63.10020(e)(2)(iii)];
 - D) The date and time that non-clean fuel combustion ends [40 CFR 63.10020(e)(2)(iv)]; and
 - E) The date and time that clean fuels being combusted for the purpose of shutdown ends [40 CFR 63.10020(e)(2)(v)].
 - iii) For PM work practice monitoring during startup periods, and collect data according to 40 CFR 63.10020 and the site-specific monitoring plan required by 40 CFR 63.10010(1). Except for an EGU that uses PM CEMS or PM CPMS to demonstrate compliance with the PM emissions limit, or individual non-mercury metals CEMS, the permittee shall [40 CFR 63.10020(e)(3)]:
 - A) Record temperature and combustion air flow or calculated flow as determined from combustion equations of post-combustion (exhaust) gas, as well as amperage of forced draft fan(s), upstream of the filterable PM control devices during each hour of startup [40 CFR 63.10020(e)(3)(i)];

- B) Record temperature and flow of exhaust gas, as well as amperage of any induced draft fan(s), downstream of the filterable PM control devices during each hour of startup [40 CFR 63.10020(e)(3)(ii)];
- C) For an EGU with an electrostatic precipitator, record the number of fields in service, as well as each field's secondary voltage and secondary current during each hour of startup [40 CFR 63.10020(e)(3)(iii)];
- D) For an EGU with a fabric filter, record the number of compartments in service, as well as the differential pressure across the baghouse during each hour of startup [40 CFR 63.10020(e)(3)(iv)];
- E) For an EGU with a wet scrubber needed for filterable PM control, record the scrubber liquid to flue gas ratio and the pressure drop across the scrubber during each hour of startup [40 CFR 63.10020(e)(3)(v)].
- m) Except as otherwise provided in 40 CFR 63.10020(c), if the permittee use a CEMS to measure SO₂, PM, HCl, HF, or Hg emissions, or using a sorbent trap monitoring system to measure Hg emissions the permittee shall demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO₂, O₂, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day rolling average basis, updated at the end of each new boiler operating day [40 CFR 63.10021(b)].
- n) The permittee shall monitor the SCR's ammonia injection rate, the SDA's hydrated lime injection rate, and the change in pressure (ΔP) for each system. The permittee shall compare and maintain these systems according to the manufacturer's specifications and with good engineering practices. [401 KAR 52:020, Section 10]
- o) The permittee shall monitor the SO₂ concentration through the indicative CEMS and shall operate the CEMS according to 1. <u>Operating Limitations</u>: (k) [401 KAR 52:020, Section 10].
- p) See Section F Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

5. <u>Specific Recordkeeping Requirements:</u>

- a) The permittee shall keep records in accordance with 401 KAR 61:015, Section 6, with the exception that the permittee shall maintain records for a period of five years.
- b) In accordance with 401 KAR 61:005, Section 3, Performance Specification 1 of 40 CFR 60, Appendix B, 401 KAR 52:020, Section 10, and 40 CFR 75.2(a), the permittee shall maintain the records of the following:
 - i) Data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard;
 - ii) Results of all compliance tests;
 - iii) Records of the fuel analysis;
 - iv) Rate of fuel burned for each fuel on a daily basis;
 - v) Heating value and ash content on a weekly basis; and
 - vi) Average electrical output and the minimum and maximum hourly generation rate on a daily basis.

- c) During periods of PM continuous emissions monitoring malfunction, maintenance, or repair, TVA shall maintain the records of the pressure drop across baghouses, fan amperage and inlet temperature of the baghouses monitored on a continuous basis [401 KAR 61:005, Section 3, Performance Specification 1 of 40 CFR 60, Appendix B, 401 KAR 52:020, Section 10, and 40 CFR 64].
- d) The permittee shall maintain records of the causes and corrective actions taken associated with any exceedance or excursion identified in 4. <u>Specific Monitoring Requirements</u>: (b)(iii) or (iv) [40 CFR 64.6(c)].
- e) The permittee shall maintain visible observation records and U.S. EPA Reference Method 9 observations in a designated logbook. Records shall be maintained for five years [401 KAR 52:020, Section 10].
- f) The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system or monitoring devices calibration checks; adjustments and maintenance performed on these systems and devices [401 KAR 52:020, Section 10].
- g) If five percent or more of a unit's operating hours in a calendar quarter report PM exceedances, in accordance with the compliance assurance monitoring in 4. <u>Specific</u> <u>Monitoring Requirements</u>: (b)(v) then the permittee shall develop and maintain a quality improvement plan (QIP) according to 40 CFR 64.8 [40 CFR 64.6(c)].
- h) The permittee shall record and maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the affected facility, any malfunction of the air pollution control equipment; or any period during which a continuous monitoring system or monitoring device is inoperative [401 KAR 52:020, Section 10].
- i) The permittee shall comply with all applicable notification and recording requirements in 40 CFR 63.10030 through 40 CFR 63.10033 according to the schedule in 40 CFR 63.10030 and Subpart A of 40 CFR 63, no later than April 16, 2016. The permittee shall demonstrate compliance no later than 180 days after April 16, 2016 (October 13, 2016) [40 CFR 63.9984(f)].
- j) The permittee shall maintain adequate records of the accounts of each tune-up and provide documentation that all tune-up meet all rule requirements [40 CFR 63.10005(f)].
- k) Upon request, the permittee shall make available to the EPA Administrator such records as may be necessary to determine whether the performance tests have been done according to the requirements in 40 CFR 63, Subpart UUUUU [40 CFR 63.10007(f)].
- 1) The permittee shall maintain records according to Appendix A of 40 CFR 63, Subpart UUUUU and the following [40 CFR 63.10032(a)]:
 - A copy of each notification and report that the permittee submitted to comply with 40 CFR 63, Subpart UUUUU, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv) [40 CFR 63.10032(a)(1)];
 - ii) Records of performance stack tests, fuel analysis, or other compliance demonstrations and performance evaluations, as required in 40 CFR 63.10(b)(2)(viii) [40 CFR

63.10032(a)(2)].

- m) For each CEMS, the permittee shall maintain the following:
 - i) Records described in 40 CFR 63.10(b)(2)(vi) through (xi) [40 CFR 63.10032(b)(1)];
 - ii) Previous versions of the performance evaluation plan as required in 40 CFR 63.8(d)(3) [40 CFR 63.10032(b)(2)];
 - iii) Request for alternatives to relative accuracy test for CEMS as required in 40 CFR 63.8(f)(6)(i) [40 CFR 63.10032(b)(3)];
 - iv) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during the period of startup, shutdown, or malfunction or during another period [40 CFR 63.10032(b)(4)]
- n) The permittee shall maintain the records required in Table 7 of 40 CFR 63, Subpart UUUUU to show continuous compliance with each emission limit and operating limit that applies to the permittee [40 CFR 63.10032(c)].
- o) The permittee shall maintain the following:
 - i) Records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used [40 CFR 63.10032(d)(1)];
 - ii) If the permittee combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1), the permittee shall maintain a record which documents how the secondary material meets each of the legitimacy criteria. If the permittee combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(2), the permittee shall maintain records as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c), the permittee shall maintain a record which documents how the fuel satisfies the requirements of the petition [40 CFR 63.10032(d)(2)];
- p) Regarding startup periods or shutdown periods:
 - i) Should the permittee choose to rely on paragraph (1) of the definition of "startup" in 40 CFR 63.10042 for the EGU, the permittee shall maintain records of the occurrence and duration of each startup or shutdown [40 CFR 63.10032(f)(1)].
- q) The permittee shall maintain records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment [40 CFR 63.10032(g)].
- r) The permittee shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.10000(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 63.10032(h)].
- s) The permittee shall maintain records of the type(s) and amount(s) of fuel used during each startup or shutdown [40 CFR 63.10032(i)].
- t) If a tune-up occurs prior to April 16, 2015, the permittee shall maintain records showing that the tune-up met all rule requirements [40 CFR 63.10000(f)].
- u) The permittee shall maintain records during startup periods and shutdown periods, as provided in 40 CFR 63.10032 and 40 CFR 63.10021(h) [40 CFR 63, Subpart UUUUU Table 3].

- v) The permittee shall maintain records in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1) [40 CFR 63.10033(a)].
- w) As specified in 40 CFR 63.10(b)(1), the permittee shall maintain each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record [40 CFR 63.10033(b)].
- x) The permittee shall maintain each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3 years [40 CFR 63.10033(c)].
- y) The permittee shall maintain records of the SCR ammonia injection rate, the change in pressure. For the SDA, the permittee shall maintain records of the change in pressure, the airflow through the SDA and the change in temperature [401 KAR 52:020, Section 10].
- z) The permittee shall monitor the SO₂ concentration through the indicative CEMS and shall operate the CEMS according to 1. <u>Operating Limitations</u>: (k) [401 KAR 52:020, Section 10].

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

- a) The permittee shall maintain the following minimum data requirements and report quarterly by approved field office format. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter [401 KAR 61:005, Section 3].
 - i) The permittee shall submit, in writing to the cabinet, for every calendar quarter, a written report of excess emissions, including a description of the nature and cause of the excess emissions if known, as follows [401 KAR 61:005, Section 3(15)]:
 - A) The averaging period used for data reporting shall correspond to the averaging period specified in the emission test method used to determine compliance with an emission standard for the applicable pollutant and source category in question [401 KAR 61:005, Section 3(15)(a)].
 - ii) For gaseous measurements, the summary shall consist of hourly averages in the units of the applicable standard. The hourly averages shall not appear in the written summary, but shall be provided in electronic files only [401 KAR 63:005 Section 3(15)(d)].
 - iii) The date and time identifying each period during which the continuous monitoring system was inoperative, except for zero and span checks, and the nature of system repairs or adjustments shall be reported. Proof of continuous monitoring system performance whenever system repairs or adjustments have been made is required [401 KAR 63:005 Section 3(15)(e)].
 - iv) When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be included in the report [401 KAR 63:005 Section 3(15)(f)].
- b) For exceedances that occur as a result of start-up, the permittee shall report [401 KAR 52:020, Section 10]:
 - i) The type of start-up (cold, warm, or hot);
 - ii) Whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of why the start-up exceeded recommended or typical durations.

- c) The permittee shall report the following information regarding its CAM plan according to the general reporting requirements specified in Section F Monitoring, Recordkeeping, and Reporting Requirements (5) of this permit [401 KAR 52:020, Section 10 and 40 CFR 64.9(a)]:
 - i) Number of exceedances or excursions [40 CFR 64.9(a)(2)(ii)];
 - ii) Duration of each exceedance or excursion [40 CFR 64.9(a)(2)(ii)];
 - iii) Cause of each exceedance or excursion [40 CFR 64.9(a)(2)(i)];
 - iv) Corrective actions taken on each exceedance or excursion [40 CFR 64.9(a)(2)(i)];
 - v) Number of monitoring equipment downtime incidents [40 CFR 64.9(a)(2)(ii)];
 - vi) Duration of each monitoring equipment downtime incident [40 CFR 64.9(a)(2)(ii)];
 - vii) Cause of each monitoring equipment downtime incident [40 CFR 64.9(a)(2)(ii)];
 - viii) Description of actions taken to implement a quality improvement plan and upon completion of the quality improvement plan, documentation that the plan was completed and reduced the likelihood of similar excursions or exceedances [40 CFR 64.9(a)(2)(iii)].
- d) The permittee shall report quarterly the total sulfur dioxide and nitrogen oxides emissions [401 KAR 52:020, Section 10].
- e) The permittee shall report the results of performance tests and performance tune-ups within 60 days after the completion of the performance test and performance tune-ups. The reports for all subsequent performance tests shall include all applicable information required in 40 CFR 63.10031 [40 CFR 63.10006(j)].
- f) The permittee shall report each instance in which the permittee did not meet an applicable emissions limit or operating limit in Table 2 through 3 of 40 CFR 63, Subpart UUUUU or failed to conduct a required tune-up. These instances are deviations from the requirements of 40 CFR 63, Subpart UUUUU and shall be reported according to 40 CFR 63.10031 [40 CFR 63.10021(g)].
- g) The permittee shall submit all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6) and 40 CFR 63.9(b) through (h) that apply to the permittee [40 CFR 63.10030(a)].
- h) The permittee shall submit Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin [40 CFR 63.10030(d)].
- i) The permittee shall submit each report according to Table 8 of 40 CFR 63, Subpart UUUUU that applies. For continuously monitoring Hg emissions, the permittee shall also submit the electronic reports required under appendix A, at the specified frequency [40 CFR 63.10031(a)].
- j) Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee shall submit each report by the date in Table 8 of 40 CFR 63, Subpart UUUUU and according to the requirements specified [40 CFR 63.10031(b)]:
 - i) The first compliance report shall cover the initial period (April 16, 2016) and end on December 31, 2017 (at least 180 days after the applicable start date) [40 CFR 63.10031(b)(1)];
 - ii) The first compliance report shall be postmarked or submitted electronically no later than January 31, 2017 [40 CFR 63.10031(b)(2)];

- iii) Each subsequent compliance report shall cover the semiannual reporting period from January 1 to June 30 or July 1 through December 31 [40 CFR 63.10031(b)(3)];
- iv) Each subsequent compliance report shall be postmarked or submitted electronically no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period [40 CFR 63.10031(b)(4)].
- v) For each affected source that is subject to permitting regulations pursuant 40 CFR 70 or 71 and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates specified in 40 CFR 63.10031(b)(1) through (4) [40 CFR 63.10031(b)(5)].
- k) The semiannual compliance report shall contain the following [40 CFR 63.10031(c) and 40 CFR 63, Subpart UUUUU, Table 8, Item 1]:
 - i) The information required by the summary report located in 40 CFR 63.10(e)(3)(vi) [40 CFR 63.10031(c)(1)];
 - ii) The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited, to, a description of the fuel, whether the fuel has received a non-waste determination by the EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure [40 CFR 63.10031(c)(2)];
 - iii) Indicate whether the permittee burned new types of fuel during the reporting period. If new type of fuel was burned, the permittee shall include the date of the performance test where that fuel was in use[40 CFR 63.10031(c)(3)];
 - iv) Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the tune-up provisions specified in 40 CFR 63.10021(e)(6) and (7) where completed [40 CFR 63.10031(c)(4)];
 - v) A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during the test[40 CFR 63.10031(c)(7)];
 - vi) A certification [40 CFR 63.10031(c)(8)];
 - vii) For deviations from any emission limit, work practice standard, or operating limit, the permittee shall also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation [40 CFR 63.10031(c)(9)];
 - viii) If there are no deviations from any emission limitations (emission limit and operating limit) that apply and there are no deviations from the requirements for work practice standards, the permittee shall provide a statement that there were no deviations from the emission limitations and work practice standards during the reporting period. If there were no periods during which the CMS were out-of-control as specified in 40 CFR 63.8(c)(7), the permittee shall provide a statement that there were no periods during which the CMS were out-of-control as specified in 40 CFR 63.8(c)(7), the permittee shall provide a statement that there were no periods during which the CMS were out-of-control during the reporting period [40 CFR 63, Subpart UUUUU, Table 8 Item 1(b)]
 - ix) If the permittee has a deviation from any emission limitation (emission limit and operating limit) or work practice standard during the reporting period, the report shall contain the information in 40 CFR 63.10031(d). If there were periods during which the CMS were out-of-control, as specified in 40 CFR 63.8(c)(7), the report shall control the information in 40 CFR 63.10031(e). [40 CFR 63, Subpart UUUUU, Table 8 Item 1(c)].

- For each excess emissions occurring where the permittee is using a CMS to comply with that emission limit or operating limit, the permittee shall include the information required in 40 CFR 63.10(e)(3)(v) in the compliance report specified in 40 CFR 63.10031(c) [40 CFR 63.10031(d)].
- m) The permittee shall report all deviations as defined in 40 CFR 63, Subpart UUUUU, in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [40 CFR 63.10031(e)]
- n) On or after July 1, 2018, within 60 days after the date of completing each performance test, the permittee shall submit the performance test reports required by 40 CFR 63, Subpart UUUUU to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). Performance test data shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (see http://www.epa.gov/ttn/chief/ert/index.html). Only data collected using those test methods on the ERT Web site are subject to 40 CFR 63.10031(f) for submitting reports electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to EPA. The electronic media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted shall be submitted to EPA via CDX. At the discretion of the delegated authority, the permittee shall also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority. [40 CFR 63.10031(f)]
 - i) On or after July 1, 2018, within 60 days after the date of completing each CEMS (Hg) performance evaluation test, as defined in 40 CFR 63.2 and required by 40 CFR 63, Subpart UUUUU, the permittee shall submit the relative accuracy test audit (RATA) data (or, for PM CEMS, RCA and RRA data) required by 40 CFR 63, Subpart UUUUU to EPA's WebFIRE database by using CEDRI that is accessed through EPA's CDX (www.epa.gov/cdx). The RATA data shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool (ERT) (http://www.epa.gov/ttn/chief/ert/index.html). Only RATA data compounds listed on the ERT Web site are subject to this requirement. Owners or operators who claim that some of the information being submitted for RATAs is confidential business information (CBI) shall submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media

(including, but not limited to, flash drives) by registered letter to EPA and the same ERT file with the CBI omitted to EPA via CDX as described earlier in this paragraph. The compact disk or other commonly used electronic storage media shall be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. At the discretion of the delegated authority, owners or operators shall also submit these RATAs to the delegated authority in the format specified by the delegated authority. Owners or operators shall submit calibration error testing, drift checks, and other information required in the performance evaluation as described in 40 CFR 63.2 and as required in 40 CFR [40 CFR 63.10031(f)(1)].

- ii) On or after July 1, 2018, for a PM CEMS, within 60 days after the reporting periods ending on March 31st, June 30th, September 30th, and December 31st, the permittee shall submit quarterly reports to EPA's WebFIRE database by using the CEDRI that is accessed through EPA's CDX (*www.epa.gov/cdx*). The permittee shall use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA's reporting form output format. For each reporting period, the quarterly reports shall include all of the calculated 30-boiler operating day rolling average values derived from the CEMS and PM CPMS [40 CFR 63.10031(f)(2)].
- iii) Reports for a Hg CEMS and any supporting monitors for such systems (such as a diluent or moisture monitor) shall be submitted using the ECMPS Client Tool, as provided for in Appendices A and B to 40 CFR 63, Subpart UUUUU and 40 CFR 63.10021(f) [40 CFR 63.10031(f)(3)].
- iv) On or after April 16, 2017, submit the compliance reports required under 40 CFR 63.10031(c) and 40 CFR 63.10031(d) and the notification of compliance status required under 40 CFR 63.10030(e) to EPA's WebFIRE database by using the CEDRI that is accessed through EPA's CDX (*www.epa.gov/cdx*). The permittee shall use the appropriate electronic reporting form in CEDRI or provide an alternate electronic file consistent with EPA's reporting form output format [40 CFR 63.10031(f)(4)].
- v) All reports required by 40 CFR 63, Subpart UUUUU not subject to the requirements in 40 CFR 63.10031(f) introductory text and 40 CFR 63.10031(f)(1) through (4) shall be sent to the Administrator at the appropriate address listed in 40 CFR 63.13. If acceptable to both the Administrator and the owner or operator of an EGU, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to 40 CFR 63.10031(f) (6. Specific Reporting Requirements: (n)) introductory text and 40 CFR 63.10031(f)(1) through (4) (6. Specific Reporting Requirements: (n)(i) through (iv)) in paper format [40 CFR 63.10031(f)(5)].
- vi) Prior to July 1, 2018, all reports subject to electronic submittal in 40 CFR 63.10031(f) introductory text, (f)(1), (2), and (4) shall be submitted to the EPA at the frequency specified in electronic portable document format (PDF) using the ECMPS Client Tool. Each PDF version of a submitted report shall include sufficient information to assess compliance and to demonstrate that the testing was done properly. The following data elements shall be entered into the ECMPS Client Tool at the time of submission of each PDF file [40 CFR 63.10031(f)(6)]:
 - A) The facility name, physical address, mailing address (if different from the physical address), and county [40 CFR 63.10031(f)(6)(i)];
 - B) The ORIS code (or equivalent ID number assigned by EPA's Clean Air Markets

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

Division (CAMD)) and the Facility Registry System (FRS) ID [40 CFR 63.10031(f)(6)(ii)];

- C) The EGU (or EGUs) to which the report applies. Report the EGU IDs as they appear in the CAMD Business System [40 CFR 63.10031(f)(6)(iii)];
- D) If any of the EGUs in 6. <u>Specific Reporting Requirements</u>: (n)(vi)(C) share a common stack, indicate which EGUs share the stack. If emissions data are monitored and reported at the common stack according to 40 CFR 75, report the ID number of the common stack as it is represented in the electronic monitoring plan required under 40 CFR 75.53 [40 CFR 63.10031(f)(6)(iv)];
- E) The identification of each emission point to which the report applies. An "emission point" is a point at which source effluent is released to the atmosphere, and is either a dedicated stack that serves one of the EGUs identified 6. Specific <u>Reporting Requirements</u>: (n)(vi)(C) or a common stack that serves two or more of those EGUs. To identify an emission point, associate it with the EGU or stack ID in the CAMD Business system or the electronic monitoring plan (*e.g.*, "Unit 2 stack," "common stack CS001," or "multiple stack MS001") [40 CFR 63.10031(f)(6)(vi)];
- F) The rule citation (*e.g.*, 40 CFR 63.10031(f)(1), 40 CFR 63.10031(f)(2), etc.) for which the report is showing compliance [40 CFR 63.10031(f)(6)(vii)];
- G) The pollutant(s) being addressed in the report [40 CFR 63.10031(f)(6)(viii)];
- H) The reporting period being covered by the report (if applicable) [40 CFR 63.10031(f)(6)(ix)];
- I) The relevant test method that was performed for a performance test (if applicable) [40 CFR 63.10031(f)(6)(x)];
- J) The date the performance test was conducted (if applicable) [40 CFR 63.10031(f)(6)(xi)]; and
- K) The responsible official's name, title, and phone number [40 CFR 63.10031(f)(6)(xii)].
- o) If the permittee has a malfunction during the reporting period, the compliance report shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have cause any applicable emission limitation to be exceeded [40 CFR 63.10031(g)].
- p) See Section F Monitoring, Recordkeeping and Reporting Requirements.

7. <u>Specific Control Equipment Operating Conditions</u>:

- a) The bagfilters shall be continuously operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].
- b) Records regarding the maintenance of the bagfilters shall be maintained and retained by the permittee for a period of five years [401 KAR 59:005].
- c) See Section E Source Control Operating Conditions for further requirements.
- d) At all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will

be based on information available to the EPA Administrator 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 63.10000(b)].

- e) The permittee shall continuously operate the SCR and SDA at all times the associated unit is in operation (except during a malfunction that is determined to be a force majeure event), so as to minimize emissions to the greatest extent technically practicable consistent with the technological limitations, manufacturer's specifications, fire prevention codes, and good engineering and maintenance practices for such pollution control technology or combustion control [Paragraph 19, 73, 89 of CAA-04-2010-1760].
- f) The permittee shall, at a minimum, to the extent reasonably practicable and consistent with manufacturers' specifications, the operational design of the unit, and good engineering practices operate each compartment of the Baghouse (except for a Baghouse compartment that, as part of the original design of the Baghouse when it was first constructed, is a spare compartment); and replace bags as needed on each Baghouse as needed to maximize collection efficiency [paragraph 102, CAA-04-2010-1760].

Emission Unit: 13A (EP 4, EP 32 - EP 36, EP 39 - EP 44) - Solid-Fuel handling operations

Description:

KY	Facility	Title V		Operation	Control	Construction				
EIS	EU	EP	Emission Unit Description	Rate:	Device	Completed:				
		4	Screening and Crushing Building & Facilities		Enclosure & Foam					
		32	Rotary and/or Bottom Dump to Hopper at Railcar Unloader		Enclosure & Chemical Surfactant					
		33	Hopper Discharge to Conveyor BC-1		Enclosure & Foam					
		34	Bucket Wheel Discharge to Boom Conveyor (Reclaim)		Bucket Wheel Reclaimer					
		35	Boom Conveyor Discharge to Yard Conveyor BC-25 (Reclaim)		Enclosure					
	13A	36	Yard Conveyor BC-25 Discharge to Surge Bin		Enclosure					
13A		39	Discharge from Conveyors BC-3 and BC-4 to Conveyors BC-6 and BC-7	700 - 2,500	Enclosure & Foam	1989, 1998, and				
IJA		13A	40	Discharge from Trippers 1&2 to Bunkers	Tons/hr	Enclosure & Foam Carryover	2000			
							41	Discharge from Conveyor BC-5 to Yard Conveyor or Auxiliary Stockout Conveyor		Enclosure & Chemical Surfactant
		42	Discharge from Yard Conveyor to Elevating Conveyor		Chemical Surfactant Carryover					
		43	Discharge from Elevating Conveyor to Boom Conveyor		Enclosure & Chemical Surfactant Carryover					
		44	Discharge from Boom Conveyor to Coal Storage Yard		Chemical Surfactant Carryover					

Applicable Regulations:

401 KAR 60:005, Section 2(2)(gg), 40 CFR 60.250 to 60.258 (Subpart Y), Standards of Performance for Coal Preparation and Processing Plants; and

401 KAR 63:010, Fugitive Emissions

1. **Operating Limitations:**

a) The permittee shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished, or a road to be used without taking reasonable precaution to prevent particulate

matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following [401 KAR 63:010, Section 3(1)]:

- i) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land; [401 KAR 63:010, Section 3(1)(a)]
- ii) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts; [401 KAR 63:010, Section 3(1)(b)]
- iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or similar operations. [401 KAR 63:010, Section 3(1)(c)]
- iv) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
- v) The maintenance of paved roadways in a clean condition; [401 KAR 63:010, Section 3(1)(e)] or
- vi) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]
- A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

2. <u>Emission Limitations:</u>

a) No person shall cause, suffer, allow, or permit any continuous emission into the open air from a control device or stack associated with any emission unit which is equal to or greater than forty (40) percent opacity)].

Compliance Demonstration Method:

See 4. <u>Specific Monitoring Requirements (a). and 5. Specific Recordkeeping</u> <u>Requirements b.</u>

b) For emissions from a control device or stack, no person shall cause, suffer, allow, or permit the emission into the open air of particulate matter (PM) from any emission unit which is in excess of the following: [401 KAR 61:020, Section 3(2)(a)]:

Process Rate (ton/hr):	Maximum Allowable Emission Rate (lb/hr):
$P \le 0.5$	E = 2.58
$0.5 < P \le 30$	$E = 4.10P^{0.67}$
P > 30	$E = 55.0P^{0.11}-40$

Compliance Demonstration Method:

Compliance with the 401 KAR 61:020 PM emission limitation shall be demonstrated according to 7. <u>Specific Control Equipment Operating Conditions</u> a. and b.

c) The permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater [40 CFR 60.254(a)].

Compliance Demonstration Method:

Compliance is demonstrated through initial performance testing as required by 40 CFR 60.8. See **4.** Specific Monitoring Requirements (a).

- d) The permittee shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]
 - i) More than five (5) minutes of emission time during any sixty (60) minute observation period [401 KAR 63:010, Section 3(2)(a)]; or
 - ii) More than twenty (20) minutes of emission time during any twenty-four (24) hour period [401 KAR 63:010, Section 3(2)(b)].

3. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the amount of fossil fuels received and processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- b) If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]
- c) See Section F Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

5. <u>Specific Recordkeeping Requirements:</u>

- a) The permittee shall maintain records of the fossil fuels received and processed on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log.
- c) The permittee shall maintain a log of the following:

- i) Qualitative fugitive emissions observations conducted including the date, time, initials of observer, whether any fugitive dust emissions were observed,
- ii) Any Reference Method 22 performed, and field records identified in Reference Method 22.
- iii) Any corrective action taken and the results.

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

See Section F - Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

7. Specific Control Equipment Operating Conditions:

- a) The control equipment (including but not limited to hoods, enclosures, use of dust suppressant/foam, telescopic chute, and water spray system) shall be operated to maintain compliance with applicable requirements, consistent with manufacturer's specification and standard operating practice [401 KAR 50:055].
- b) The permittee shall maintain records regarding the maintenance of the control equipment for a period of five years [401 KAR 52:020, Section 10].
- c) See Section E Source Control Operating Conditions for further requirements.

Emissions Unit: 13B (EP 7) - Coal Storage Yard

Description:

KY					Maximum	Control Device	Construction
EIS	EU	EP	Description	iption Operating Rate		Commenced:	
13B	13B	7	Coal Storage Yard	2,500	Wet	1998	
130	150	/	Coal Storage Talu	tons per hour	Suppression	1990	

Applicable Regulations:

401 KAR 63:010, Fugitive emissions

1. **Operating Limitations:**

- a) A person shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
 - i) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - ii) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations.
 - iv) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - v) The maintenance of paved roadways in a clean condition; or
 - vi) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air [401 KAR 63:010, Section 3(3)].
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered [401 KAR 63:010, Section 4(1)].
- d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway [401 KAR 63:010, Section 4(3)].

2. <u>Emission Limitations:</u>

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

- a) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
- b) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

3. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the Cabinet [401 KAR 50:045, Section 1].

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the actions taken to prevent the particulate matter from becoming airborne on a daily basis [401 KAR 52:020, Section 10].
- b) The permittee shall monitor the amount of coal received, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- c) If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log [401 KAR 52:020, Section 10].
- b) The permittee shall maintain records of the amount of coal received in tons, on a monthly basis [401 KAR 52:020, Section 10].
- c) The permittee shall maintain a log of the following:
 - i) Qualitative fugitive emissions observations conducted including the date, time, initials of observer, whether any fugitive dust emissions were observed,
 - ii) Any Reference Method 22 performed and field records identified in Reference Method 22.
 - iii) Any corrective action taken and the results [401 KAR 52:020, Section 10].

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

See Section F - Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

Emission Unit: 16 (EP 17 - EP 24) - Fly Ash/CCR Handling

Description:

Equipment includes:

Surge bin vacuum system bagfilter units 1 & 4, surge bin vacuum system bagfilters for future SCR units, two fly ash transfer silos, two fly ash disposal silos, conditioned CCR unloading, dry CCR unloading all controlled by a baghouse.

Maximum operating rates:

KY EIS	Facility Title V EU EP		Description:	Throughput:	Reconstruction Commenced					
		17	Surge bin vacuum system bagfilter units 1 & 4		2015-2017					
	1	18	Surge bin vacuum system bagfilter for future SCR units							
		19	Surge bin vacuum system bagfilter for future SCR units	18 tons/hr	TBA					
16	16	16	16	20	Surge bin vacuum system bagfilter for future SCR units					
									21	Two fly ash transfer silos (2)
		22	Two fly ash disposal silos (2)	300 tons/hr	1988					
		23	Conditioned CCR unloading	460 tons/hr	1988					
		24	Dry CCR unloading	300 tons/hr						

Applicable Regulations:

401 KAR 59:010, New process operations

1. **Operating Limitations:**

NA

2. <u>Emission Limitations:</u>

a) Allowable particulate matter emissions are based on the following table where P is the process rate in ton/hr and E is the maximum allowable emission rate in lb/hr. Particulate matter emissions into the open air shall not exceed [401 KAR 59:010, Section 3(2)]:

Process Rate (ton/hr):	Equation:
$P \le 0.5$	E = 2.34
$0.5 < P \le 30$	$E = 3.59P^{0.62}$
P > 30	$E = 17.31P^{0.16}$

b) Visible emissions from any stack shall not equal or exceed 20 percent opacity, based on a 6-minute average [401 KAR 59:010, Section 3(1)(a)].

Compliance Demonstration Method:

See 4. Specific Monitoring Requirements: (a)

3 <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the cabinet in accordance with 401 KAR 50:045, Section 4 [401 KAR 52:020, Section 10].

4) **Specific Monitoring Requirements:**

- a) The permittee shall monitor the amount of fly ash processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall perform a qualitative visual observation of the opacity emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are observed, the permittee shall determine opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions [401 KAR 52:020, Section 10].
- c) Install, calibrate, maintain, and operate a pressure drop monitoring device to continuously monitor the differential pressure across the baghouse to ensure that pressure does not drop outside the pressure drop range documented by the manufacturer's specifications or the pressure drop range determined during the most recent performance test. Personnel will monitor the differential pressure reading across the baghouse at least once per shift during all times of operation [401 KAR 52:020, Section 10].
- d) The permittee shall inspect the control equipment on a weekly basis to ensure the operation is in compliance with manufacturer's specifications and standard operating practices [401 KAR 52:020, Section 10].

5 Specific Recordkeeping Requirements:

- a) The permittee shall maintain the records of amount of fly ash processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall maintain records of differential pressure readings across the baghouse. [401 KAR 52:020, Section 10]
- c) A log of the qualitative weekly visual observations made at the control device or stack as specified in **4. Monitoring Requirements** including the date, time, initials of observer, whether any emissions were observed (yes/no), and any Method 9 readings taken. The permittee shall maintain records for five years. [401 KAR 52:020, Section 10].

6 Specific Reporting Requirements:

See Section F - Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

7 <u>Specific Control Equipment Operating Conditions</u>:

- a) The baghouses shall be maintained and operated to ensure the emission unit is in compliance with manufacturer's specifications and standard operating practices [401 KAR 50:055, Section 5].
- b) The permittee shall maintain, and retain for a period of five years, records regarding the maintenance of the control equipment [401 KAR 59:005, Section 3(4)].
- c) See Section **E Source Control Operating Conditions** for further requirements.

Emission Unit:

18A (EP 45, EP 49, EP 58) - Hydrated Lime and Fuel Additives

(S-Sorb III and M-Sorb) Transportation

Description:

DUSU										
KY EIS	Faci Title	-	Equipment: Trucks Hauling (Unpaved/Paved Roads)	Controls	Maximum Operating	Construction Commencement				
LIS	EU	EP	(Onpaved/Faved Roads)		Rate	Commencement				
		45	Hydrated Lime for	Wet Suppression						
18A	8A 18A		101	101	43	Injection System	(by watering,	43.6	2013, 2017	
18A	10A	49	Hydrated Lime for SDA System	cleaning and road	tons/hr	2013, 2017				
		58	S-Sorb III and M-Sorb Hauling	maintenance)						

Applicable Regulations:

401 KAR 63:010, Fugitive emissions

1. **Operating Limitations**:

- a) A person shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]
 - i) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
 - ii) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts;
 - iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations.
 - iv) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
 - v) The maintenance of paved roadways in a clean condition; or
 - vi) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water.
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air [401 KAR 63:010, Section 3(3)].
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered [401 KAR 63:010, Section 4(1)].

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

d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway [401 KAR 63:010, Section 4(3)].

2. <u>Emission Limitations:</u>

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. Part 60, for: [401 KAR 63:010, Section 3(2)]

- a) More than five (5) minutes of emission time during any sixty (60) minute observation period; or
- b) More than twenty (20) minutes of emission time during any twenty-four (24) hour period.

3. <u>Testing Requirements</u>:

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the rate of material hauled (tons, vehicle miles traveled (VMT), gallons/hr, etc.) for each unit or vehicle on paved and unpaved roadways on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall monitor the reasonable precautions taken (e.g. water usage for roads, enclosures are in good operating condition) to prevent the discharge of visible fugitive emissions beyond the property line for each unit on a daily basis [401 KAR 52:020, Section 10].
- c) The permittee shall make visual observations of the lot line on a daily basis for each day of operation. If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct Reference Method 22 (visual determination of fugitive emissions) observations per Appendix A of 40 C.F.R. Part 60. In lieu of conducting U.S. EPA Reference Method 22, the permittee shall immediately perform a corrective action (applying water or chemical wetting agent etc.) which results in no visible fugitive dust emissions beyond the lot line of the property.
- d) See Section F Monitoring, Recordkeeping, and Reporting Requirements (1), (2), and (3).

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain records of the material received in tons on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log.
- c) The permittee shall maintain a log of the following:
 - i) Qualitative fugitive emissions observations conducted daily including the date, time, initials of observer, whether any fugitive dust emissions were observed,
 - ii) Any Reference Method 22 performed and field records identified in Reference

Method 22.

iii) Any corrective action taken and the results.

6. Specific Reporting Requirements:

See Section F - Monitoring, Recordkeeping, and Reporting Requirements, (5), (6), (7), and (8).

Emission Unit: 18B (EP 46, EP47) - Hydrated Lime Injection System

Description:

KY	KY EIS		lity e V	Equipment	Controls	Maximum Operating Limit	Construction
EU	EP	EU	EP			Operating Linit	
	46 A 46 B 46 C 46 D 46 E 46 F 46 G 46 H 46 I	46 18B 47	46	Silo Dust Collector Exhaust for Storage Silos 1-9	Bagfilter	43.6 tons/hr	
18B	47 A 47 B 47 C 47 D 47 E 47 F 47 G 47 H 47 I		Feed Hopper Loading Dust Collector Exhaust for Silos 1-9	Bagfilter	10.35 tons/hr	2013	

* 90,667 tons per year per 12-month rolling total

Applicable Regulations:

401 KAR 59:010, New process operations

1. **Operating Limitations**:

See 7. Specific Control Equipment Operating Conditions: (a) through (c).

2. <u>Emission Limitations:</u>

a) Allowable particulate matter emissions are based on the following table where P is the process rate in ton/hr and E is the maximum allowable emission rate in lb/hr. Particulate matter emissions into the open air shall not exceed [401 KAR 59:010, Section 3(2)]:

Process Rate (ton/hr):	Equation:
$P \le 0.5$	E=2.34
$0.5 < P \le 30$	$E = 3.59P^{0.62}$
P > 30	$E = 17.31P^{0.16}$

b) The permittee shall not cause to be discharged into the atmosphere from any of the above listed units emissions equal to or greater than 20 percent opacity [401 KAR 59:010, Section 3(1)(a)].

<u>Compliance Demonstration Method:</u> See 4. <u>Specific Monitoring Requirements</u>: (a).

3. <u>Testing Requirements</u>:

Testing shall be conducted at such times as may be requested by the cabinet in accordance with 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

- a) The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are observed, the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions. [401 KAR 52:020, Section 10]
- b) The permittee shall complete weekly operation checks of the baghouse vents. The permittee shall verify that the filter is in service and operating properly [401 KAR 52:020, Section 10].
- c) The permittee shall install, calibrate, maintain, and operate a pressure drop monitoring device to continuously monitor the differential pressure across the baghouse to ensure that pressure does not drop outside the pressure drop range documented by the manufacturer's specifications or the pressure drop range determined during the most recent performance test. Personnel will monitor the differential pressure reading across the baghouse at least once per shift during all times of operation. [401 KAR 52:020, Section 10]

5. Specific Recordkeeping Requirements:

- a) The permittee shall maintain the records of amount of hydrated lime processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall maintain a log of the weekly qualitative visual observations made at the control device or stack, including the date, time, initials of observer, whether any emissions were observed (yes/no), and any Method 9 readings taken or corrective actions performed. [401 KAR 52:020, Section 10]
- c) The permittee shall record, and make available for inspection to Division personnel, inspections performed on baghouse vent filters [401 KAR 52:020, Section 10].
- d) The permittee shall maintain records of differential pressure readings across the baghouse. [401 KAR 52:020, Section 10]

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

See Section F - Monitoring, Recordkeeping, and Reporting Requirements for further requirements.

7. Specific Control Equipment Operating Conditions:

- a) The baghouse filters shall be maintained and operated consistent with manufacturer's specifications and standard operating practices to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 [401 KAR 50:055, Section 2].
- b) The permittee shall maintain records regarding the maintenance of the control equipment [401 KAR 59:005, Section 3(4)].
- c) See Section E Source Control Operating Conditions for further requirements.

Emission Unit:

19 (EP 50 – EP 57) - Spray Dryer Absorber System (Units 1 & 4)

KY	Facilit	y Title V	Description	Rate	Construction	
EIS	EU	EP	Description	(tons/hr)	Commencement:	
		50	Hydrated Lime Bin for Unit 1 SDA	5.2		
	51	Hydrated Lime Bin for Unit 4 SDA	5.2			
	19 19	52	Lime Slurry Tank for Unit 1 SDA	21	2015	
10		53	Lime Slurry Tank for Unit 4 SDA			
19		54	Recycle Silo for Unit 1 SDA	29	2013	
		55	Recycle Silo for Unit 4 SDA	29		
		56	Recycle Mix Tank for Unit 1 SDA	(1		
		57	Recycle Mix Tank for Unit 4 SDA	61		

Applicable Regulations:

401 KAR 59:010, New process operations

1. **Operating Limitations**:

N/A

2. <u>Emission Limitations</u>:

a) Allowable particulate matter emissions are based on the following table where P is the process rate in ton/hr and E is the maximum allowable emission rate in lb/hr. Particulate matter emissions into the open air shall not exceed [401 KAR 59:010, Section 3(2)]:

Process Rate (ton/hr):	Equation:
$P \le 0.5$	E=2.34
$0.5 < P \le 30$	$E = 3.59P^{0.62}$
P > 30	$E = 17.31P^{0.16}$

Compliance Demonstration Method:

Compliance is demonstrated by 7. <u>Specific Control Equipment Operating Conditions</u>: (a).

b) The permittee shall not cause to be discharged into the atmosphere from any of the above listed units emissions equal to or greater than 20 percent opacity [401 KAR 59:010, Section 3(1)(a)].

Compliance Demonstration Method:

Compliance with the opacity limit is demonstrated by **4.** <u>Specific Monitoring</u> <u>Requirements</u>: (a).

3. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

4. <u>Specific Monitoring Requirements</u>:

a) The permittee shall perform a qualitative visual observation of the opacity of emissions from each control device or stack on a weekly basis and maintain a log of the observations. If visible emissions are observed, the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using Method 9,

the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume) [401 KAR 52:020, Section 10].

b) The permittee shall monitor the amount of hydrated lime received, in tons, on a monthly basis [401 KAR 52:020, Section 10].

5. <u>Specific Recordkeeping Requirements</u>:

- a) The permittee shall maintain a log of the weekly qualitative visual observations made at the control device or stack, including the date, time, initials of observer, whether any emissions were observed (yes/no), and any Method 9 readings taken or corrective actions performed [401 KAR 52:020, Section 10]
- b) The permittee shall maintain records of the amount of hydrated lime processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].

6. <u>Specific Reporting Requirements</u>: See Section F- Monitoring, Recordkeeping, and Reporting Requirements.

7. <u>Specific Control Equipment Operating Conditions</u>:

- a) The permittee shall maintain and operate the dust collector equipment in accordance with manufacturer's specifications and standard operating practices to ensure the emission units are in compliance with applicable requirements of 401 KAR 59:010 [401 KAR 50:055, Section 2].
- b) The permittee shall maintain records regarding maintenance of the control equipment [401 KAR 59:005, Section 3(4)].
- c) See Section E Source Control Operating Conditions for further requirements.

Emission Unit:20 – [EP 59, EP 60, EP 61, & (EP 58 – Haul Road for S-Sorb III and
M-Sorb transport is part of 18A)] – Fuel Additives Silos (S-Sorb III)

KY	Facility	Title V	Description	Rate	Control	Removal	Commenced
EIS	EU	EP	Description (tons/hr) Control I		Efficiency	Construction	
		59	S-Sorb III Storage Silo loading	0.04	Bin Vent Filter	99.95%	
20	20	60	S-Sorb III Discharge to Tube Conveyors	1.64	Enclosure	70%	2017
		61	S-Sorb III Discharge to Coal Conveyors	1.64	Enclosure	70%	

Applicable Regulations:

401 KAR 59:010, New process operations

1. <u>Operating Limitations:</u> See 7. <u>Specific Control Equipment Operating Conditions.</u>

2. <u>Emission Limitations</u>:

a) Allowable particulate matter emissions are based on the following table where P is the process rate in ton/hr and E is the maximum allowable emission rate in lb/hr. Particulate matter emissions into the open air shall not exceed [401 KAR 59:010, Section 3(2)]:

Process Rate (ton/hr):	Equation:
$P \le 0.5$	E = 2.34
$0.5 < P \le 30$	$E = 3.59P^{0.62}$

<u>Compliance Demonstration Method</u>:

Compliance is demonstrated by 7. <u>Specific Control Equipment Operating Conditions</u>: (a).

3. The permittee shall not cause to be discharged into the atmosphere from any of the above listed units emissions equal to or greater than 20% opacity [401 KAR 59:010, Section 3(1)(a)].

Compliance Demonstration Method:

Compliance with the opacity limit is demonstrated by **4.** <u>Specific Monitoring</u> <u>Requirements</u>: (a).

4. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

5. <u>Specific Monitoring Requirements</u>:

a) The permittee shall perform a qualitative visual observation of the opacity of emissions from each control device or stack on a weekly basis and maintain a log of the observations. If visible emissions are observed, the permittee shall determine the opacity using U.S. EPA Reference Method 9. In lieu of determining the opacity using Method 9, the permittee shall immediately perform a corrective action which results in no visible emissions (not including condensed water in the plume) [401 KAR 52:020, Section 10].

b) The permittee shall monitor the amount of S-Sorb III received, in tons, on a monthly basis [401 KAR 52:020, Section 10].

2. Specific Recordkeeping Requirements:

- a) The permittee shall maintain a log of the weekly qualitative visual observations made at the control device or stack, including the date, time, initials of observer, whether any emissions were observed (yes/no), and any Method 9 readings taken or corrective actions performed [401 KAR 52:020, Section 10].
- b) The permittee shall maintain records of the amount of S-Sorb III processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].

3. <u>Specific Reporting Requirements</u>: See Section F- Monitoring, Recordkeeping, and Reporting Requirements.

4. <u>Specific Control Equipment Operating Conditions</u>:

- a) The permittee shall maintain and operate the dust collector equipment in accordance with manufacturer's specifications and standard operating practices to ensure the emission units are in compliance with applicable requirements of 401 KAR 59:010 [401 KAR 50:055, Section 2].
- b) The permittee shall maintain records regarding maintenance of the control equipment [401 KAR 59:005, Section 3(4)].
- c) See Section E Source Control Operating Conditions for further requirements.

Emission Unit: 49 - (EP 48) – Emergency Diesel Engine

Description:

Emergency Diesel Engine for Cell Phone Tower						
KY	Facility	Title V	Operating Pote	Eval type	Manufaatuman/Madal	Manufactured
EIS	EU	EP	Operating Rate	Fuel type	Manufacturer/Model	Manufactured
49	48	48	99 HP (0.693 MMBtu/hr)	No. 2 Fuel Oil	Cummins 4BT3.9-G4	6/1/2004

Applicable Regulations:

401 KAR 63:002, Section 2(4)(eeee), 40 CFR 63.6580 through 63.6675, Tables 1a through 8, and Appendix A (Subpart ZZZZ), *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.*

Non-Applicable Regulations:

401 KAR 60:005, Section 2(2)(dddd), 40 CFR 60.4200 through 60.4219, Tables 1 through 8 (IIII), Standards of Performance for Stationary Compression ignition (CI) Internal Combustion engine

1. **Operating Limitations:**

- a) The permittee shall meet the following requirements, except during periods of startup: [40 CFR 63.6603 referencing Table 2d.4.]
 - i) Change oil and filter every 500 hours of operation or annually, whichever comes first. The permittee has the option to utilize an oil analysis program as described in 40 CFR 63.6625(i) or (j) in order to extend the specified oil change requirement; [40 CFR 63, Subpart ZZZZ, Table 2d.4.a.]
 - ii) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and [40 CFR 63, Subpart ZZZZ, Table 2d.4.b.]
 - iii) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. [40 CFR 63, Subpart ZZZZ Table 2d.4.c.]
 - iv) If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in 40 CFR 63, Subpart ZZZZ, Table 2d, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. The permittee shall report any failure to perform the management practice on the schedule required and the federal, state, or local law under which the risk was deemed unacceptable. [40 CFR 63, Subpart ZZZZ, Table 2d]
- b) The permittee shall be in compliance with the emission limitations, operating limitations, and other requirements established in 40 CFR 63, Subpart ZZZZ at all times. [40 CFR 63.6605(a)]
- c) 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 any further efforts to reduce emissions if levels required by 40 CFR 63, Subpart ZZZZ have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator 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)]

- d) The permittee shall operate and maintain the stationary RICE 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)(3) and 40 CFR 63.6640(a) Referencing Table 6.9.a.i. & ii.]
- e) The permittee shall install a non-resettable hour meter if one is not already installed [40 CFR 63.6625(f)].
- f) 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, after which time the emission standards applicable to all times other than startup in 40 CFR 63, Subpart ZZZZ, Table 2d apply. [40 CFR 63.6625(h)]
- g) The permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6602. The oil analysis shall be performed at the same frequency specified for changing the oil in 40 CFR 63.6602. The analysis program shall at a minimum analyze the following three 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 engine permittee is not required to change the oil. If any of the limits are exceeded, the engine 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 engine permittee shall change the oil within 2 days or before commencing operation, whichever is later. The permittee shall maintain records of the parameters that are 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)].
- h) The permittee shall operate the emergency engine according to the requirements in 40 CFR 63.6640(f)(1) through (4). In order for the engine to be considered an emergency stationary RICE under 40 CFR 63, Subpart ZZZZ, 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 63.6640(f)(1) through (4), is prohibited. If the engine is not operated according to the requirements in 40 CFR 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under

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

40 CFR 63, Subpart ZZZZ and shall meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

- i) There is no time limit on the use of emergency engine in emergency situations. [40 CFR 63.6640(f)(1)]
- ii) The permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR 63.6640(f)(2)(i) through (iii) 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). The emergency stationary RICE 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 the emergency engine beyond 100 hours per calendar year. [40 CFR 63.6640(f)(2) and (f)(2)(i)]
- iii) The emergency stationary RICE located at area sources of HAP 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 in 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)]
- iv) 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 identity 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 owner or operator. [40 CFR 63.6640(f)(4)(ii)(E)]

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

2. <u>Emission Limitations:</u>

N/A

3. <u>Testing Requirements:</u>

Testing shall be conducted at such times as may be requested by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the amount of fuel oil usage (gallons) for the engine on an annual basis [401 KAR 52:020, Section 10].
- b) See 5. <u>Specific Recordkeeping Requirements</u>: (b)

5. <u>Specific Recordkeeping Requirements:</u>

- a) The permittee shall maintain records of the amount of fuel oil usage (gallons) for the generator on an annual basis [401 KAR 52:020, Section 10].
- b) If the existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions does not meet the standards applicable to non-emergency engines, then the permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter and 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 [40 CFR 63.6655(f)].

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

- a) The permittee shall report each instance in which the requirements, as they apply, in Table 8 through 40 CFR 63, Subpart ZZZZ Applicability of General Provisions to Subpart ZZZZ were not met [40 CFR 63.6640(e)].
- b) The following records shall be maintained in a form suitable and readily available for expeditious review in hard copy or electronic form for 5 years following the date of each occurrence.
 - i) Each notification and report that is submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40 CFR 63.10(b)(2)(xiv) [40 CFR 63.6655(a)(1)];
 - ii) The occurrence and duration of each malfunction of operation [40 CFR 63.6655 (a)(2)];
 - iii) 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)];
 - iv) Maintenance conducted on the stationary RICE in order to demonstrate that the permittee operated and maintained the stator RICE according to the maintenance plan if the permittee operate any of the following RICE [40 CFR 63.6655(e)];
 - v) The permittee shall maintain records of the hours of operation of the engine that is recorded through the non-resettable hour meter and shall document how many hours are spent for emergency operations including what classified the operation as

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

emergency and how many hours are spent for non-emergency operation. If the engine is used for demand response operation, the permittee shall maintain records of the notification of the emergency situation, and the time the engine was operated as part of demand response [40 CFR 63.6655(f)];

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

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

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

62 & 63 - CCR Hauling and Landfill Operations:

KY EIS		Facility Title V	Description:	Control:	Operating	
EU No.	EP No	EU No.	Description.	Condon.	Rate:	
	62A		Hauling conditioned CCR from fly ash silos to landfill (paved road)	Wet Suppression of Haul Roads	460 tons/hr	
	62B		Trucks hauling CCR on landfill (unpaved road)	Wet Suppression CCR @ 15% moisture compaction	460 tons/hr	
	62C		CCR discharge from trucks to landfill (drop operation)	None	460 tons/hr	
	62D		Front-end loader hauling bottom ash to trucks (paved road)	Wet suppression of haul roads	46 tons/hr	
62	62E	62	Front-end loader discharge bottom ash to trucks (drop operations)	None	46 tons/hr	
	62F		Hauling bottom ash from dewatering facility to fly ash silos (unpaved road)	Wet suppression of haul roads	46 tons/hr	
	62G		Hauling bottom ash from fly ash silos to CCR landfill (paved road)	Wet suppression of haul roads	46 tons/hr	
	62H		Hauling bottom ash on landfill (unpaved road)	Wet suppression CCR at 15% moisture content	46 tons/hr	
	62I		Bottom ash discharge from trucks to landfill (drop operations)	None	46 tons/hr	
63	63A		Pile maintenance dozer (unpaved road)	Water suppression CCR at 15% moisture content, compaction	4 MPH	
	63B	63	Pile maintenance roller for compaction (unpaved)	Water suppression CCR at 15% moisture content, compaction	4 MPH	
	63C		Wind erosion from landfill storage pile	Water suppression CCR at 15% moisture content, compaction	10 acres	

<u>Applicable Regulations</u>:

401 KAR 63:010, Fugitive emissions

<u>Precluded Regulations</u>:

401 KAR 51:017, Section 8 to 16, *Prevention of significant deterioration to air quality*

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

1. **Operating Limitations:**

- a) A person shall not cause, suffer, or allow any material to be handled, processed, transported, or stored; a building or its appurtenances to be constructed, altered, repaired, or demolished; or a road to be used without taking reasonable precaution to prevent particulate matter (PM) from becoming airborne. Reasonable precautions shall include, as applicable: [401 KAR 63:010, Section 3(1)]:
 - i) Use, if possible, of water or suitable chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land; [401 KAR 63:010, Section 3(1)(a)]
 - ii) Application and maintenance of asphalt, oil, water, or suitable chemicals on roads, materials stockpiles, and other surfaces which can create airborne dusts; [401 KAR 63:010, Section 3(1)(b)]
 - iii) Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials, or the use of water sprays or other measures to suppress the dust emissions during handling. Adequate containment methods shall be employed during sandblasting or other similar operations. [401 KAR 63:010, Section 3(1)(c)]
 - iv) Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne; [401 KAR 63:010, Section 3(1)(d)]
 - v) The maintenance of paved roadways in a clean condition; or [401 KAR 63:010, Section 3(1)(e)]
 - vi) The prompt removal of earth or other material from a paved street which earth or other material has been transported thereto by trucking or earth moving equipment or erosion by water. [401 KAR 63:010, Section 3(1)(f)]
- b) If dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from a building or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may, based on the cause, type, or amount of a fugitive emission, order that the building or equipment in which processing, handling and storage are done be tightly closed and ventilated in such a way that all air and gases and air or gas borne material leaving the building or equipment are treated by removal or destruction of air contaminants before discharge to the open air. [401 KAR 63:010, Section 3(3)]
- c) At all times while in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. [401 KAR 63:010, Section 4(1)]
- d) A person shall not cause, suffer, or allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. [401 KAR 63:010, Section 4(3)]

2. <u>Emission Limitations:</u>

A person shall not cause, suffer, or allow visible fugitive dust emissions beyond the lot line of the property on which the emissions originate, as determined by Reference Method 22 of Appendix A in 40 C.F.R. part 60, for: [401 KAR 63:010, Section 3(2)]

- i) More than five (5) minutes of emission time during any sixty (60) minutes observation period; or [401 KAR 63:010, Section 3(2)(a)]
- ii) More than twenty (20) minutes of emission time during any twenty-four (24) hours period. [401 KAR 63:010, Section 3(2)(b)]

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

3. <u>Testing Requirements</u>:

Testing shall be conducted at such times as may be requested by the Cabinet. [401 KAR 50:045, Section 1]

4. Specific Monitoring Requirements:

- a) The permittee shall monitor the rate of material hauled (tons, vehicle miles traveled (VMT)) for each unit or vehicle on paved and unpaved roadways on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall monitor actions taken (e.g. water usage for roads, enclosures are in good operating condition) to prevent the PM from becoming airborne on a daily basis [401 KAR 52:020, Section 10].
- c) The permittee shall perform a qualitative visual observation of the lot line once per day, during operation. If fugitive dust emissions beyond the lot line of the property are observed, the permittee shall conduct a U.S. EPA Reference Method 22 (visual determination of fugitive emissions) observation per Appendix A of 40 C.F.R. part 60. In lieu of conducting a Method 22, the permittee may immediately perform a corrective action which results in no visible fugitive dust emissions beyond the lot line of the property. [401 KAR 52:020, Section 10]
- d) See Section F Monitoring, Recordkeeping, and Reporting Requirements (1), (2), and (3).

5. <u>Specific Recordkeeping Requirements</u>:

- a) The permittee shall maintain records of the material received in tons on a monthly basis [401 KAR 52:020, Section 10].
- b) The permittee shall maintain a log of the reasonable precautions taken to prevent particulate matter from becoming airborne, on a daily basis. Notation of the operating status, down-time, or relevant weather conditions are acceptable for entry to the log.
- c) The permittee shall maintain a log of the following:
 - i) Qualitative fugitive emissions observations conducted daily including the date, time, initials of observer, whether any fugitive dust emissions were observed,
 - ii) Any Reference Method 22 performed and field records identified in Reference Method 22.
 - iii) Any corrective action taken and the results.

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

See Section F - Monitoring, Recordkeeping, and Reporting Requirements, (5), (6), (7), and (8).

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

-			-	
Insignificant Activities	Facility ID	Facility Calculated uncontrolled PTE	Description	Generally Applicable Regulation 401 KAR
COAL HANI	DLING			
IA01	IA-1	1.64 ton/yr	Auxiliary stockout conveyor discharge to ground - 1,400 tph	63:010
IA02	IA-2	0.0185 ton/yr	Yard conveyor (open) horizontal movement - 2,500 tph	63:010
IA03	IA-3	0.768 ton/yr	Pile discharge to reclaim hopper (underpile) at conveyor BC-8 - 1,400 tph	63:010
IA04	IA-4	0.768 ton/yr	Reclaim hopper discharge to conveyor BC-8 - 1,400 tph	63:010
IA05	IA-5	0.768 ton/yr	Pile discharge to reclaim hopper (underpile) at conveyor BC-9 - 1,400 tph	63:010
IA06	IA-6	0.768 ton/yr	Reclaim hopper discharge to conveyor BC-9 - 1,400 tph	63:010
IA07	IA-7	1.54 ton/yr	Coal bunker exhausts (Boiler Units 1-9) - 4,500 cfm/unit	63:010
POWERHOU				
IA08	IA-8		Hydrogen dump valve vents	N/A
IA09	IA-9		Loop seal tank vapor extractor	N/A
IA10	IA-10		Turbine oil tank vapor extractor	N/A
IA11	IA-11		Seal oil vacuum pump vent	N/A
OUTSIDE BU		AND TANKS		L
IA12	IA-12		Hydrogen trailer ports A & B	N/A
IA13	IA-13		Transformer clean oil tank - 37,590 gal	N/A
IA14	IA-14		Transformer dirty oil tank - 37,590 gal	N/A
IA15	IA-15		Boiler lighting-off fuel oil tanks (2) - 37,500 gal each	N/A
IA16	IA-16		Used circuit breaker oil tank - 10,000 gal	N/A
IA17	IA-17		Dust suppression chemical tanks (4) using Coaltrol 430 3,000 gal; 3,000 gal; 1,500 gal, and 550 gal	N/A
IA18	IA-18		Diesel tanks (2) - est. 12,000 gal each	N/A
IA19	IA-19		Gasoline tank - est. 10,000 gal	59:050
IA20	IA-20		Diesel tank (ash handling area) - 10,000 gal	N/A
IA21	IA-21		S-Sorb III storage silo	N/A
IA22	IA-22		M-Sorb storage tank (12,000 gal)	N/A
IA23	IA-23		Ammonia tanks (2) for Units 1 and 4 SCR 18,000 gal each	N/A
IA24	IA-24		Acetic acid storage tank (2) 2,000 gal and 4,050 gal 56% concentration	N/A
DORMANT	COAL PIL	E SCREENING		
IA25	IA-25	0.0164 ton/yr	Scalping screen/transfer conveyor	59:010
IA26	IA-26	0.136 ton/yr	Screener	59:010
IA27	IA-27	0.00783 ton/yr	Oversize conveyor	59:010
IA28	IA-28	0.00783 ton/yr	Oversize pile	59:010
IA29	IA-29	0.0164 ton/yr	Product conveyor	59:010
IA30	IA-30	0.0164 ton/yr	Telescoping conveyor	59:010
IA31	IA-31	0.0164 ton/yr	Coal pile	59:010
IA32	IA-32	0.00207 ton/yr	Magnet reject	59:010
IA33	IA-33	0.00207 ton/yr	Reject pile	59:010

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

- 1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
- 2. Particulate matter, sulfur dioxide, opacity, nitrogen oxides, and carbon monoxide emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

- 1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
- 2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit:
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

- 4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
- 5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.
- 7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- 8. The permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken shall be submitted to the Regional Office listed on the front of this permit. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. Where the underlying applicable requirement does not identify a specific time frame for reporting deviations, prompt reporting, as required by Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, shall be defined as follows:
 - a. For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in an applicable regulation) that continue for more than an hour in excess of permit requirements, the report must be made within 24 hours of the occurrence.
 - b. For emissions of any regulated air pollutant, excluding those listed in F.8.a., that continue for more than two hours in excess of permit requirements, the report must be made within 48 hours.
 - c. All deviations from permit requirements, including those previously reported, shall be included in the semiannual report required by F.6.
- 9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality	U.S. EPA Region 4
Paducah Regional Office	Air Enforcement Branch
130 Eagle Nest Drive	Atlanta Federal Center
Paducah, KY 42003	61 Forsyth St. SW
	Atlanta, GA 30303-8960

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee.

SECTION G - GENERAL PROVISIONS

- 1. General Compliance 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 26].
 - b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
 - c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
 - (4) New requirements become applicable to a source subject to the Acid Rain Program.

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

- f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
- g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 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 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 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.].
- p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at

the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:

- (1) Applicable requirements that are included and specifically identified in this permit; and
- (2) Non-applicable requirements expressly identified in this permit.
- 2. Permit Expiration and Reapplication Requirements
 - a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
 - b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].
- 3. <u>Permit Revisions</u>
 - a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
 - b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.
- 4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission units: (2,3,5,6,7,8,9), are adding SCR on the other seven (7) boilers in accordance with the terms and conditions of the permit (V-23-006).

- a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
- b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, notification of the following:
 - (1) The date when construction commenced.
 - (2) The date of start-up of the affected facilities listed in this permit.

- (3) The date when the maximum production rate specified in the permit application was achieved.
- c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.
- d. Pursuant to 401 KAR 50:055, Section 2(1)(a), an owner or operator of any affected facility subject to any standard within the administrative regulations of the Division for Air Quality shall-demonstrate compliance with the applicable standard(s) within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of such facility. Pursuant to 401 KAR 52:020, Section 3(3)(c), sources that have not demonstrated compliance within the timeframes prescribed in 401 KAR 50:055, Section 2(1)(a), shall operate the affected facility only for purposes of demonstrating compliance unless authorized under an approved compliance plan or an order of the cabinet.
- e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in
- f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.
- 5. <u>Testing Requirements</u>
 - a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.
 - b. Pursuant to 401 KAR 50:045, Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

- c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.
- 6. Acid Rain Program Requirements
 - a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 76510 (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
 - b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NOx compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.
- 7. Emergency Provisions
 - a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (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 224.1-400, 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 82.155.
- (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156 and 40 CFR 82.157.
- (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. <u>Risk Management Provisions</u>

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to U.S. EPA using the RMP* eSubmit software.
- b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS NA

SECTION I - COMPLIANCE SCHEDULE

NA

SECTION J – ACID RAIN PERMIT

1) Statutory and Regulatory Authorities:

For emission units 1-9, the Energy and Environment Cabinet, Division of Air Quality issues this permit pursuant to 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and 40 CFR 76 and in accordance to KRS 224.10-100 and Titles IV and V of the Clean Air Act.

i. So	O ₂ Allowance	Allocations and	d NO _x Re	quirements t	for the a	affected units:
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SO ₂ Allowances: Tables 2, 3 or 4 of	Year					
40 CFR 73	2023	2024	2025	2026	2027	
Unit 1	2,622*	2,622*	2,622*	2,622*	2,622*	
Unit 2	2,702*	2,702*	2,702*	2,702*	2,702*	
Unit 3	3,043*	3,043*	3,043*	3,043*	3,043*	
Unit 4	3,025*	3,025*	3,025*	3,025*	3,025*	
Unit 5	2,954*	2,954*	2,954*	2,954*	2,954*	
Unit 6	3,242*	3,242*	3,242*	3,242*	3,242*	
Unit 7	3,581*	3,581*	3,581*	3,581*	3,581*	
Unit 8	3,427*	3,427*	3,427*	3,427*	3,427*	
Unit 9	3,672*	3,672*	3,672*	3,672*	3,672*	

* The number of allowances allocated to Phase II affected units by the U.S. EPA may change under 40 CFR 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U. S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

NO _x Limits
 (i) Pursuant to 40 CFR Part 76, the Kentucky Division for Air Quality approves the NO_x emissions averaging plan for this unit. This plan is effective for calendar year 2020 through 2024. Under this plan, determined in accordance with 40 CFR Part 75, this unit's NO_x emissions shall not exceed the annual average alternative contemporaneous emissions limitation (ACEL) of 0.45 lb/MMBtu.
(ii) In addition, the actual BTU-weighted annual average NO_x emissions rate for the unit in the plan shall be less than or equal to the BTU-weighted annual average NO_x emissions rate for the same unit had it been operated, during the same period of time, in compliance with the applicable emissions limitations under 40 CFR Part 76.5, 76.6, or 76.7.
 (iii) If the designated representative demonstrates that the requirement of condition (ii) (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emissions limitation set in condition (i). In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess

SECTION J – ACID RAIN PERMIT - CONTINUED

ii. Comments, Notes, and Justifications:

Affected units are nine (9) dry bottom wall fired boilers.

iii. Permit Application:

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

iv. Summary of Actions: Previous Actions:

1. Draft Phase II Permit (# AR-96-17) including SO₂ compliance was issued for public comments on September 19, 1996.

2. Final Phase II Permit (# AR-96-17) including SO₂ compliance plan was issued on February 21, 1997.

3. Draft Phase II Permit (# A-98-004) was issued with 1998 revised SO₂ allowance allocations and NO_x emissions standard for public comment on December 7, 1998.

4. Final Phase II Permit (# A-98-004) including the 1998 revised SO₂ allowance allocations and NO_x emissions standards was issued on June 18, 1999.

Present Action:

Draft Title V with Section J Acid Rain Permit has been proposed for public comment.

SECTION K – CLEAN AIR INTERSTATE RULE (CAIR)

CSAPR implementation is now in place and replaces requirements under EPA's 2005 Clean Air Interstate Rule.

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

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_x Annual Trading Program, CSAPR NO_x Ozone Season Group 2 Trading Program, and CSAPR SO_2 Group 1 Trading Program

Unit ID: 1, 2, 3, 4, 5, 6, 7, 8 & 9 Pulverized Coal Fired Boilers							
Parameter	Continuous	Excepted	Excepted	Low Mass	EPA-approved		
	emission	monitoring	monitoring	Emissions	alternative		
	monitoring	system	system	excepted	monitoring		
	system or systems	requirements	requirements	monitoring	system		
	(CEMS) requirements pursuant to 40 CFR 75, Subpart B (for SO ₂ monitoring) and 40 CFR 75, Subpart H (for	for gas- and oil- fired units pursuant to 40 CFR 75, appendix D	for gas- and oil- fired peaking units pursuant to 40 CFR 75, appendix E	(LME) requirements for gas- and oil- fired units pursuant to 40 CFR 75.19	requirements pursuant to 40 CFR 75, Subpart E		
	NO _x monitoring)						
SO ₂	Х						
NOx	Х						
Heat input	Х						

- 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 40 CFR 97.430 through 97.435 (CSAPR NO_X Annual Trading Program), 97.1030 through 97.1035 (CSAPR NO_X Ozone Season Group 2 Trading Program), and 97.630 through 97.635 (CSAPR SO₂ 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: <u>http://www.epa.gov/airmarkets</u>.
- 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 part 75, subpart E and 40 CFR 75.66 and 97.435 (CSAPR NOx Annual Trading Program), 97.1035 (CSAPR NO_X Ozone Season Group 2 Trading Program), and/or 97.635 (CSAPR SO₂ 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/part-75-petition-responses.
- 4. Owners and operators that want to use an alternative to any monitoring, recordkeeping, or reporting requirement under 40 CFR 97.430 through 97.434 (CSAPR NO_X Annual Trading Program), 97.1030 through 97.1034 (CSAPR NO_X Ozone Season Group 2 Trading Program), and/or 97.630 through 97.634 (CSAPR SO₂ Group 1 Trading Program) must

submit to the Administrator a petition requesting approval of the alternative in accordance with 40 CFR 75.66 and 97.435 (CSAPR NO_X Annual Trading Program), 97.1035 (CSAPR NO_X Ozone Season Group 2 Trading Program), and/or 97.635 (CSAPR SO₂ Group 1 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 <u>https://www.epa.gov/airmarkets/data-resources</u>

5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (CSAPR NO_X Annual Trading Program), 97.1030 through 97.1034 (CSAPR NO_X Ozone Season Group 2 Trading Program), and 97.630 through 97.634 (CSAPR SO₂ Group 1 Trading Program), and therefore minor permit modification procedures, in accordance with 40 CFR 70.7(e)(2)(i)(B) or 71.7(e)(1)(i)(B), may be used to add or change this unit's monitoring system description.

CSAPR NO_x Annual Trading Program Requirements (40 CFR 97.406)

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 40 CFR 97.413 through 97.418.

- b) Emissions monitoring, reporting, and recordkeeping requirements.
 - 1) The owners and operators, and the designated representative, of each CSAPR NOx Annual source and each CSAPR NOx Annual unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.430 through 97.435.
 - 2) The emissions data determined in accordance with 40 CFR 97.430 through 97.435 shall be used to calculate allocations of CSAPR NOx Annual allowances under 40 CFR 97.411(a)(2) and (b) and 97.412 and to determine compliance with the CSAPR NOx 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 40 CFR 97.430 through 97.435 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c) NO_x emissions requirements.

- 1) CSAPR NO_x 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_X Annual source and each CSAPR NO_X Annual unit at the source shall hold, in the source's compliance account, CSAPR NO_X Annual allowances available for deduction for such control period under 40 CFR 97.424(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Annual units at the source.
 - ii) If total NO_x emissions during a control period in a given year from the CSAPR NO_x Annual units at a CSAPR NO_x Annual source are in excess of the CSAPR NO_x Annual emissions limitation set forth in paragraph (c)(1)(i) above, then:

- A) The owners and operators of the source and each CSAPR NO_X Annual unit at the source shall hold the CSAPR NO_X Annual allowances required for deduction under 40 CFR 97.424(d); and
- B) The owners and operators of the source and each CSAPR NO_X 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 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- 2) CSAPR NO_X Annual assurance provisions.
 - i) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Annual units at CSAPR NO_x 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_x 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_x Annual allowances available for deduction for such control period under 40 CFR 97.425(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.425(b), of multiplying—
 - 1. 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
 - 2. The amount by which total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state for such control period exceed the state assurance level.
 - ii) The owners and operators shall hold the CSAPR NO_X 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 the year of such control period.
 - iii) Total NO_x emissions from all CSAPR NO_x Annual units at CSAPR NO_x Annual sources in the state during a control period in a given year exceed the state assurance level if such total NO_x emissions exceed the sum, for such control period, of the state NO_x Annual trading budget under 40 CFR 97.410(a) and the state's variability limit under 40 CFR 97.410(b).
 - iv) It shall not be a violation of 40 CFR part 97, subpart AAAAA or of the Clean Air Act if total NO_X emissions from all CSAPR NO_X Annual units at CSAPR NO_X 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_X emissions from the CSAPR

NO_x Annual units at CSAPR NO_x 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_X Annual 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_X 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 40 CFR part 97, subpart AAAAA and the Clean Air Act.
- 3) Compliance periods.
 - A CSAPR NO_x 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 40 CFR 97.430(b) and for each control period thereafter.
 - ii) A CSAPR NO_X 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 40 CFR 97.430(b) and for each control period thereafter.
- 4) Vintage of CSAPR NO_X Annual allowances held for compliance.
 - i) A CSAPR NO_X Annual allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR NO_X Annual allowance that was allocated or auctioned for such control period or a control period in a prior year.
 - ii) A CSAPR NO_x Annual allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (c)(2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_x Annual allowance that was allocated or auctioned 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_X Annual allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart AAAAA.
- 6) Limited authorization. A CSAPR NO_x Annual allowance is a limited authorization to emit one ton of NO_x during the control period in one 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_X Annual Trading Program; and
 - ii) Notwithstanding any other provision of 40 CFR part 97, subpart AAAAA, 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_X Annual allowance does not constitute a property right.

d) Title V permit requirements.

- 1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Annual allowances in accordance with 40 CFR part 97, subpart AAAAA.
- 2) A description of whether a unit is required to monitor and report NOx emissions using a continuous emission monitoring system (under 40 CFR part 75, subpart H), an excepted monitoring system (under 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (under 40 CFR 75.19), and an alternative monitoring system (under 40 CFR part 75, subpart E) in accordance with 40 CFR 97.430 through 97.435 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 70.7(e)(2)(i)(B).

e) Additional recordkeeping and reporting requirements.

- 1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Annual source and each CSAPR NO_X Annual unit at the source shall keep 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 40 CFR 97.416 for the designated representative for the source and each CSAPR NO_x 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 40 CFR 97.416 changing the designated representative.
 - ii) All emissions monitoring information, in accordance with 40 CFR part 97, subpart AAAAA.
 - 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_x Annual Trading Program.
- 2) The designated representative of a CSAPR NO_x Annual source and each CSAPR NO_x Annual unit at the source shall make all submissions required under the CSAPR NO_x Annual Trading Program, except as provided in 40 CFR 97.418. 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 parts 70 and 71.

$\begin{array}{l} \textbf{SECTION } L-CROSS\text{-}\textbf{STATE AIR POLLUTION RULE} \left(\textbf{CSAPR} \right) \text{-} \\ \textbf{CONTINUED} \end{array}$

f) Liability.

- 1) Any provision of the CSAPR NO_X Annual Trading Program that applies to a CSAPR NO_X Annual source or the designated representative of a CSAPR NO_X Annual source shall also apply to the owners and operators of such source and of the CSAPR NO_X Annual units at the source.
- 2) Any provision of the CSAPR NO_x Annual Trading Program that applies to a CSAPR NO_x Annual unit or the designated representative of a CSAPR NO_x Annual unit shall also apply to the owners and operators of such unit.
- g) **Effect on other authorities.** No provision of the CSAPR NO_X Annual Trading Program or exemption under 40 CFR 97.405 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Annual source or CSAPR NO_X Annual unit from compliance with any other provision of the applicable, approved state implementation plan, a federally enforceable permit, or the Clean Air Act.

CSAPR NO_x Ozone Season Group 2 Trading Program Requirements (40 CFR 97.1006)

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 40 CFR 97.1013 through 97.1018.

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 40 CFR 97.1030 through 97.1035.
- 2) The emissions data determined in accordance with 40 CFR 97.1030 through 97.1035 shall be used to calculate allocations of CSAPR NO_X Ozone Season Group 2 allowances under 40 CFR 97.1011(a)(2) and (b) and 97.1012 and to determine compliance with the CSAPR NO_X 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 40 CFR 97.1030 through 97.1035 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c) NO_X emissions requirements.

- 1) CSAPR NO_x 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_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall hold, in the source's compliance account, CSAPR NO_X Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.1024(a) in an amount not less than the tons of total NO_X emissions for such control period from all CSAPR NO_X Ozone Season Group 2 units at the source.
 - ii) If total NO_X emissions during a control period in a given year from the CSAPR NO_X Ozone Season Group 2 units at a CSAPR NO_X Ozone Season Group 2 source are in

excess of the CSAPR NO_X 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_X Ozone Season Group 2 unit at the source shall hold the CSAPR NO_X Ozone Season Group 2 allowances required for deduction under 40 CFR 97.1024(d); and
- B) The owners and operators of the source and each CSAPR NO_x 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 40 CFR part 97, subpart GGGGG and the Clean Air Act.
- 2) CSAPR NO_X Ozone Season Group 2 assurance provisions.
 - i) If total NO_x emissions during a control period in a given year from all CSAPR NO_x Ozone Season Group 2 units at CSAPR NO_x 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_x 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_x Ozone Season Group 2 allowances available for deduction for such control period under 40 CFR 97.1025(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.1025(b), of multiplying—
 - A) The quotient of the amount by which the common designated representative's share of such NO_x 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_x emissions exceeds the respective common designated representative's assurance level; and
 - B) The amount by which total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X 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 NOx 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 the year of such control period.
 - iii) Total NO_X emissions from all CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X 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_X emissions exceed the sum, for such control period, of the State NO_X Ozone Season Group 2 trading budget under 40 CFR 97.1010(a) and the state's variability limit under 40 CFR 97.1010(b), and, for the control period in 2021 only, the product (rounded to the nearest

allowance) of 1.21 multiplied by the supplemental amount of CSAPR NO_X Ozone Season Group 2 allowances determined for the state under 40 CFR 97.1010(d).

- iv) It shall not be a violation of 40 CFR part 97, subpart GGGGG or of the Clean Air Act if total NO_X emissions from all base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X 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 NO_X emissions from the base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 units at base CSAPR NO_X Ozone Season Group 2 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_X 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_X 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 40 CFR part 97, subpart GGGGG and the Clean Air Act.
- 3) Compliance periods.
 - A CSAPR NO_x 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, 2021 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.1030(b) and for each control period thereafter.
 - ii) A base CSAPR NO_x 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, 2021 or the deadline for meeting the unit's monitor certification requirements under 40 CFR 97.1030(b) and for each control period thereafter.
- 4) Vintage of CSAPR Ozone Season Group 2 allowances held for compliance.
 - i) A CSAPR NO_X 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 must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated or auctioned for such control period or a control period in a prior year.
 - ii) A CSAPR NO_X Ozone Season Group 2 allowance held for compliance with the requirements under paragraphs (c)(1)(ii)(A) and (c)(2)(i) through (iii) above for a control period in a given year must be a CSAPR NO_X Ozone Season Group 2 allowance that was allocated or auctioned for a control period in a prior year or the control period in the given year or in the immediately following year.
 - (A). Allowance Management System requirements. Each CSAPR NO_X 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 40 CFR part 97, subpart GGGGG.

- 5) Limited authorization. A CSAPR NO_x Ozone Season Group 2 allowance is a limited authorization to emit one ton of NO_x during the control period in one 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_X Ozone Season Group 2 Trading Program; and
 - ii) Notwithstanding any other provision of 40 CFR part 97, subpart GGGGG, 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.
- 6) Property right. A CSAPR NO_x Ozone Season Group 2 allowance does not constitute a property right.

d) Title V permit requirements.

- 1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR NO_X Ozone Season Group 2 allowances in accordance with 40 CFR part 97, subpart GGGGG.
- 2) A description of whether a unit is required to monitor and report NOx emissions using a continuous emission monitoring system (under 40 CFR part 75, subpart H), an excepted monitoring system (under 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (under 40 CFR 75.19), or an alternative monitoring system (under 40 CFR part 75, subpart E) in accordance with 40 CFR 97.1030 through 97.1035 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.1(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B).

e) Additional recordkeeping and reporting requirements.

- 1) Unless otherwise provided, the owners and operators of each CSAPR NO_X Ozone Season Group 2 source and each CSAPR NO_X Ozone Season Group 2 unit at the source shall keep 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 40 CFR 97.1016 for the designated representative for the source and each CSAPR NO_X 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 40 CFR 97.1016 changing the designated representative.

- ii) All emissions monitoring information, in accordance with 40 CFR part 97, subpart GGGGG.
- 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 NOx Ozone Season Group 2 Trading Program.
- 2) The designated representative of a CSAPR NO_x Ozone Season Group 2 source and each CSAPR NO_x Ozone Season Group 2 unit at the source shall make all submissions required under the CSAPR NO_x Ozone Season Group 2 Trading Program, except as provided in 40 CFR 97.1018. 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 parts 70 and 71.

f) Liability.

- 1) Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 source or the designated representative of a CSAPR NO_X Ozone Season Group 2 source shall also apply to the owners and operators of such source and of the CSAPR NO_X Ozone Season Group 2 units at the source.
- Any provision of the CSAPR NO_X Ozone Season Group 2 Trading Program that applies to a CSAPR NO_X Ozone Season Group 2 unit or the designated representative of a CSAPR NO_X 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_X Ozone Season Group 2 Trading Program or exemption under 40 CFR 97.1005 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR NO_X Ozone Season Group 2 source or CSAPR NO_X 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 SO₂ Group 1 Trading Program Requirements (40 CFR 97.606)

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 40 CFR 97.613 through 97.618.

b) Emissions monitoring, reporting, and recordkeeping requirements.

- 1) The owners and operators, and the designated representative, of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall comply with the monitoring, reporting, and recordkeeping requirements of 40 CFR 97.630 through 97.635
- 2) The emissions data determined in accordance with 40 CFR 97.630 through 97.635 shall be used to calculate allocations of CSAPR SO₂ Group 1 allowances under 40 CFR 97.611(a)(2) and (b) and 97.612 and to determine compliance with the CSAPR SO₂ 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 40 CFR 97.630 through 97.635 and rounded to the nearest ton, with any fraction of a ton less than 0.50 being deemed to be zero.

c) SO₂ emissions requirements.

- 1) CSAPR SO₂ 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 SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall hold, in the source's compliance account, CSAPR SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.624(a) in an amount not less than the tons of total SO₂ emissions for such control period from all CSAPR SO₂ Group 1 units at the source.
 - ii) If total SO₂ emissions during a control period in a given year from the CSAPR SO₂
 Group 1 units at a CSAPR SO₂ Group 1 source are in excess of the CSAPR SO₂
 Group 1 emissions limitation set forth in paragraph (c)(1)(i) above, then:
 - A) The owners and operators of the source and each CSAPR SO₂ Group 1 unit at the source shall hold the CSAPR SO₂ Group 1 allowances required for deduction under 40 CFR 97.624(d); and
 - B) The owners and operators of the source and each CSAPR SO₂ 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 excess emissions and each day of such control period shall constitute a separate violation 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- 2) CSAPR SO₂ Group 1 assurance provisions.
 - i) If total SO₂ emissions during a control period in a given year from all CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ 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 SO₂ Group 1 allowances available for deduction for such control period under 40 CFR 97.625(a) in an amount equal to two times the product (rounded to the nearest whole number), as determined by the Administrator in accordance with 40 CFR 97.625(b), of multiplying-
 - A) The quotient of the amount by which the common designated representative's share of such SO₂ 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 SO₂ emissions exceeds the respective common designated representative's assurance level; and
 - B) The amount by which total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state for such control period exceed the state assurance level.

- ii) The owners and operators shall hold the CSAPR SO₂ 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 the year of such control period.
- iii) Total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ Group 1 sources in the state during a control period in a given year exceed the state assurance level if such total SO₂ emissions exceed the sum, for such control period, of the state SO₂ Group 1 trading budget under 40 CFR 97.610(a) and the state's variability limit under 40 CFR 97.610(b).
- iv) It shall not be a violation of 40 CFR part 97, subpart CCCCC or of the Clean Air Act if total SO₂ emissions from all CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ emissions from the CSAPR SO₂ Group 1 units at CSAPR SO₂ 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 SO₂ 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 SO₂ 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 40 CFR part 97, subpart CCCCC and the Clean Air Act.
- 3) Compliance periods.
 - i) A CSAPR SO₂ 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 40 CFR 97.630(b) and for each control period thereafter.
 - ii) A CSAPR SO₂ 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 40 CFR 97.630(b) and for each control period thereafter.
- 4) Vintage of CSAPR SO₂ Group 1 allowances held for compliance.
 - i) A CSAPR SO₂ Group 1 allowance held for compliance with the requirements under paragraph (c)(1)(i) above for a control period in a given year must be a CSAPR SO₂ Group 1 allowance that was allocated or auctioned for such control period or a control period in a prior year.
 - ii) A CSAPR SO₂ 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 must be a CSAPR SO₂ Group 1 allowance that was allocated or auctioned 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 SO₂ Group 1 allowance shall be held in, deducted from, or transferred into, out of, or between Allowance Management System accounts in accordance with 40 CFR part 97, subpart CCCCC.
- 6) Limited authorization. A CSAPR SO₂ Group 1 allowance is a limited authorization to emit one ton of SO₂ during the control period in one year. Such authorization is limited in its use and duration as follows:
 - i) Such authorization shall only be used in accordance with the CSAPR SO₂ Group 1 Trading Program; and
 - ii) Notwithstanding any other provision of 40 CFR part 97, subpart CCCCC, 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 SO₂ Group 1 allowance does not constitute a property right.

d) Title V permit requirements.

- 1) No title V permit revision shall be required for any allocation, holding, deduction, or transfer of CSAPR SO₂ Group 1 allowances in accordance with 40 CFR part 97, subpart CCCCC.
- 2) A description of whether a unit is required to monitor and report SO₂ emissions using a continuous emission monitoring system (under 40 CFR part 75, subpart B), an excepted monitoring system (under 40 CFR part 75, appendices D and E), a low mass emissions excepted monitoring methodology (under 40 CFR 75.19), or an alternative monitoring system (under 40 CFR part 75, subpart E) in accordance with 40 CFR 97.630 through 97.635 may be added to, or changed in, a title V permit using minor permit modification procedures in accordance with 40 CFR 70.7(e)(2) and 71.7(e)(1), provided that the requirements applicable to the described monitoring and reporting (as added or changed, respectively) are already incorporated in such permit. This paragraph explicitly provides that the addition of, or change to, a unit's description as described in the prior sentence is eligible for minor permit modification procedures in accordance with 40 CFR 70.7(e)(2)(i)(B) and 71.7(e)(1)(i)(B).

e) Additional recordkeeping and reporting requirements.

- 1) Unless otherwise provided, the owners and operators of each CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall keep 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 40 CFR 97.616 for the designated representative for the source and each CSAPR SO₂ 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 representation under 40 CFR 97.616 changing the designated representative.

$\begin{array}{l} \textbf{SECTION } L-CROSS\text{-}\textbf{STATE AIR POLLUTION RULE} \left(\textbf{CSAPR} \right) \text{-} \\ \textbf{CONTINUED} \end{array}$

- ii) All emissions monitoring information, in accordance with 40 CFR part 97, subpart CCCCC.
- 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 SO₂ Group 1 Trading Program.
- 2) The designated representative of a CSAPR SO₂ Group 1 source and each CSAPR SO₂ Group 1 unit at the source shall make all submissions required under the CSAPR SO₂ Group 1 Trading Program, except as provided in 40 CFR 97.618. 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 parts 70 and 71.

f) Liability.

- 1) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 source or the designated representative of a CSAPR SO₂ Group 1 source shall also apply to the owners and operators of such source and of the CSAPR SO₂ Group 1 units at the source.
- 2) Any provision of the CSAPR SO₂ Group 1 Trading Program that applies to a CSAPR SO₂ Group 1 unit or the designated representative of a CSAPR SO₂ Group 1 unit shall also apply to the owners and operators of such unit.
- **g)** Effect on other authorities. No provision of the CSAPR SO₂ Group 1 Trading Program or exemption under 40 CFR 97.605 shall be construed as exempting or excluding the owners and operators, and the designated representative, of a CSAPR SO₂ Group 1 source or CSAPR SO₂ 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.