

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999

Final

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name: Louisville Gas & Electric Company - KU
Mailing Address: 220 West Main Street
P.O. Box 32010
Louisville, KY 40232

Source Name: Ghent Generating Station
Mailing Address: U.S. Highway 42
Ghent, KY 41045

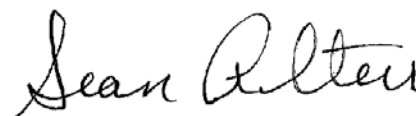
Source Location: U.S. Highway 42

Permit: V-12-028 R1
Agency Interest: 704
Activity: APE20130003, APE20140002
Review Type: Title V, Operating
Source ID: 21-041-00010

Regional Office: Florence Regional Office
8020 Veterans Memorial Drive, Suite 110
Florence, KY 41042
(859) 525-4157

County: Carroll

Application
Complete Date: September 11, 2013
Issuance Date: April 12, 2013
Revision Date: October 16, 2015
Expiration Date: April 12, 2018



Sean Alteri, Director
Division for Air Quality

TABLE OF CONTENTS

SECTION	DATE OF ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Renewal	1
B. EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Revision 1	2
C. INSIGNIFICANT ACTIVITIES	Renewal	75
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Renewal	78
E. SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS	Renewal	79
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Renewal	80
G. GENERAL PROVISIONS	Renewal	82
H. ALTERNATE OPERATING SCENARIOS	Renewal	88
I. COMPLIANCE SCHEDULE	Renewal	88
J. ACID RAIN PERMIT	Renewal	89
K. CAIR PERMIT	Revision 1	94
L. CROSS-STATE AIR POLLUTION RULE (CSAPR)	Revision 1	95

	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
V-12-028	Renewal	APE20120005	6/14/2012	4/12/2013	Renewal Permit
V-12-028 R1	Significant Revision	APE20130003	9/11/2013	10/16/2015	Incorporated 502(b)10, Consent Decree, and changed controls for EU 1 and 2
V-12-028 R1	Minor Revision	APE20140002	2/28/2014	10/16/2015	Remove ESPs, install PAC DSI and PJFFs; 5U deadline extensions for Boilers 1 and 2

Permit Number: V-12-028 R1

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality 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 Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and received 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 this Cabinet or any other federal, state, or local agency.

Permit Number: V-12-028 R1

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

Emission Unit 01: Unit 1 Indirect Heat Exchanger

Description:

Pulverized coal-fired, dry bottom, tangentially-fired boiler
 Construction commenced: before August 17, 1971
 Number two fuel oil used for startup and stabilization
 Maximum continuous rating: 5,500 MMBtu/hour

Control Equipment:

Electrostatic Precipitator (ESP) (to be removed in 2015)
 Wet Limestone Forced-Oxidation Sulfur Dioxide Scrubber (WFGD) GH1
 Low Nitrogen Oxides Burners
 Selective Catalytic Reduction (SCR)
 Dry Sorbent Injection SAM Control
 Dry Sorbent Injection Hg Control and Pulse-Jet Fabric Filter (to be installed in 2015)

Stack: EO25 (not shared)

APPLICABLE REGULATIONS:

401 KAR 51:160, NO_x Requirements for Large Utility and Industrial Boilers

401 KAR 52:060, Acid rain permits (See Section J)

401 KAR 61:015, Existing indirect heat exchangers

40 CFR 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal and Oil-fired Electric Utility Steam Generating Units

40 CFR Part 64, Compliance Assurance Monitoring (CAM) (for SO₂, SAM and PM)

40 CFR Part 75, Continuous Emission Monitoring

40 CFR 97, Subpart AAAAA, TR NO_x Annual Trading Program (See Section L)

40 CFR 97, Subpart BBBB, TR NO_x Ozone Season Trading Program (See Section L)

40 CFR 97, Subpart CCCCC TR SO₂ Group 1 Trading Program (See Section L)

APPLICABLE CONSENT DECREES:

Civil Action Number 3:12-cv-00076-GFVT, filed August 21, 2013

1. Operating Limitations:

- a. The permittee shall comply with all applicable provisions of 40 CFR 63.9991 no later than April 16, 2015. However, the Division grants a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].

Permit Number: V-12-028 R1**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****1. Operating Limitations (Continued):**

- b. Beginning no later than December 20, 2012, the permittee will continuously operate the existing SAM controls at Ghent Station Units 1, 2, 3 and 4 [Civil Action Number 3:12-cv-00076-GFVT, paragraph 19]. By no later than August 31, 2012, the permittee will install and continuously operate enhanced sorbent injection controls to reduce SAM emissions with the goal of achieving a SAM emission rate of no greater than 5 ppmvd (at 3% O₂) for this unit [Civil Action Number 3:12-cv-00076-GFVT, paragraph 20.a.].

Compliance Demonstration Method:

The permittee shall demonstrate compliance according to sub-Section 4.m., **Specific Monitoring Requirements**.

2. Emission Limitations:

- a. Before removal of the ESP, particulate matter emissions shall not exceed 0.20 lb/MMBtu based on a three (3)-hour average [401 KAR 61:015, Section 4(4)].
- b. Following removal of the ESP, particulate matter emissions shall not exceed 0.127 lb/MMBtu, based on a three (3)-hour average [401 KAR 61:015, Section 4(1)].

Compliance Demonstration Method:

Compliance with the particulate matter emission limit shall be demonstrated by stack testing as required in sub-Section 3.a., **Testing Requirements**.

- c. Before removal of the ESP, emissions shall not exceed 40 percent opacity based on a six (6)-minute average except:
 - i. that a maximum of 60 percent opacity is allowed for a period or aggregate of periods of not more than six (6) minutes in any sixty (60) minutes during building a new fire, cleaning the firebox, or blowing soot; and
 - ii. during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
[401 KAR 61:015, Section 4(4)].
- d. After removal of the ESP, emissions shall not exceed 20 percent opacity [401 KAR 61:015, Section 2], except a maximum of 40 percent opacity shall be permissible for:
 - i. not more than one (1) six (6) minute period in any sixty (60) consecutive minutes [401 KAR 61:015, Section 4(2)(a)]; and
 - ii. during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 61:015, Section 4(2)(c)].

Compliance Demonstration Method:

Compliance with the opacity standard shall be demonstrated by Reference Method 9, as

Permit Number: V-12-028 R1**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****2. Emission Limitations (Continued):**required in sub-Section 4.n., **Specific Monitoring Requirements**.

- e. Sulfur dioxide (SO₂) emissions shall not exceed 5.67 lbs/MMBtu based on a twenty-four (24)-hour average [401 KAR 61:015, Section 5(1)].

Compliance Demonstration Method:

Compliance with SO₂ emission limits shall be demonstrated by SO₂ continuous emissions monitoring systems (CEMS) as required in sub-Section 4.c., **Specific Monitoring Requirements**.

- f. Between August 31, 2012 and June 30, 2015, emissions of H₂SO₄ (SAM) shall not exceed 7 ppmvd (at 3% O₂). After June 30, 2015, emissions of SAM shall not exceed 5 ppmvd (at 3% O₂) [Civil Action Number 3:12-cv-00076-GFVT, paragraphs 20.b.i. and 20.c.i.].

Compliance Demonstration Method:

Compliance with the SAM emission rate shall be demonstrated through the use of stack testing as described in sub-Section 3., **Testing Requirements**.

- g. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015. However, the Division grants a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].

General MATS Compliance Demonstration Method:

- i. The permittee shall comply with 40 CFR 63, Subpart UUUUU, no later than April 16, 2015 [40 CFR 63.9984(b)]. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- ii. The permittee shall meet the notification requirements in 40 CFR 63.10030 according to the schedule in 40 CFR 63.10030 and in 40 CFR 63, Subpart A. Some of the notifications must be submitted before compliance with the emission limits and work practice standards in 40 CFR 63, Subpart UUUUU is required [40 CFR 63.9984(c)]. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- iii. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than one-hundred-eighty (180) days after the applicable date in paragraph (b) or (c) of 40 CFR 63.9984 [40 CFR 63.9984(f)]. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- iv. The permittee shall demonstrate continuous compliance according to 40 CFR 63.10000 through 40 CFR 63.10023, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].

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

3. Testing Requirements:

- a. The permittee shall conduct a performance test for particulate matter (filterable) emissions by the start of the fourth (4th) year of the term of this permit to demonstrate compliance with the applicable standards within the life of the permit. This requirement may be satisfied with the successful completion of testing performed in conjunction with PM CEMS compliance certification/recertification when approved by the Division [401 KAR 50:045, Section 1].
- b. Testing shall be conducted in accordance with 401 KAR 50:045, Performance Tests, and pursuant to 40 CFR 64.4(c)(1), the testing shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit.
- c. The permittee shall comply with all applicable provisions of 40 CFR 63.10005 through 40 CFR 63.10009 and 40 CFR 63.10011, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- d. Compliance with the SAM Emission Rate set forth in sub-Section 2.f., **Emission Limitations** shall be determined through stack tests conducted pursuant to the most recent procedures set forth in Appendix A of Civil Action Number 3:12-cv-00076-GFVT. Such stack tests shall be conducted under representative unit operating conditions, taking into account fuel sulfur content, load, and other parameters known to impact SAM emissions [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.a.].
- e. The permittee shall subsequently conduct a bi-annual stack test for SAM emission rate using procedures set forth in sub-Section 3.g., **Testing Requirements**, at this unit for the two (2) years following August 21, 2013. If, after the initial two (2)-year period of bi-annual stack tests, the permittee is able to demonstrate during any subsequent stack test that the SAM emission rate for this unit is less than 80% of the permanent SAM emission rate for this unit, then the permittee may reduce the frequency of the stack tests required for this unit under the Consent Decree to an annual basis until termination of the Consent Decree [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.b.].
- f. The permittee may petition EPA to change the annual stack test and reporting requirements if it can demonstrate that appropriate continuous emissions devices for SAM are available, but the permittee shall submit SAM emissions control parameters and data on at least an annual basis [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.c.].

4. Specific Monitoring Requirements:

- a. To meet the monitoring requirement for particulate matter, the permittee shall use a particulate matter continuous emissions monitor (PM-CEMS). The PM-CEMS shall comply with Performance Specification 11 of Appendix B to 40 CFR 60 and ongoing quality assurance requirements per 40 CFR 60 Appendix F, Procedure 2 [401 KAR 61:005, Section 3(6)].
- b. PM CEMS shall be used to satisfy the CAM requirements for PM.

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

4. Specific Monitoring Requirements (Continued):

- i. Excluding exempted time periods, if any three (3)-hour average particulate matter value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedances and the CEMS and make any repairs or take corrective actions as soon as practicable [40 CFR 64.3(d)(1)].
- ii. If five (5) percent or greater of the PM CEMS data recorded in a calendar quarter show excursions above the emission limitation, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate matter standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by 401 KAR 50:045 before conducting the test. The Division may waive this testing requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require stack tests at any time pursuant to 401 KAR 50:045, Performance Tests [40 CFR 64.3(d)(3)].
- c. CEMS shall be installed, calibrated, maintained, and operated for measuring nitrogen oxides, sulfur dioxide, and either oxygen or carbon dioxide emissions [401 KAR 61:005, Section 3 and Performance Specification 2 of Appendix B to 40 CFR 60 or 40 CFR 75, Appendix A].
- d. SO₂ CEMS shall be used to satisfy CAM requirements for sulfur dioxide. Excluding exempted time periods, if any twenty-four (24)-hour average sulfur dioxide value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedances and the CEMS and make any repairs or take corrective actions as soon as practicable [40 CFR 64.3(d)(1)].
- e. The sulfur content of solid fuels, as burned, in percent by weight, shall be determined on a weekly basis [401 KAR 61:015, Section 6(1)].
- f. The rate of each fuel burned shall be measured daily and recorded. The heating value and ash content of fuels shall be ascertained at least once per week and recorded. 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)].
- g. The permittee shall monitor the duration of each start-up [401 KAR 52:020, Section 10].
- h. The Division may provide a temporary exemption from the monitoring and recordkeeping requirements of 401 KAR 61:005, Section 3, for the continuous monitoring systems during any period of monitoring system malfunction, provided the permittee 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(5)].
- i. The permittee shall comply with all applicable monitoring requirements of 40 CFR 63.10010, 40 CFR 63.10020 and 40 CFR 63.10021, no later than April 16, 2015. However, the Division grants a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].

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

4. Specific Monitoring Requirements (Continued):

- j. The permittee shall implement Compliance Assurance Monitoring (CAM) at EU01 for SAM emissions based on the most recent CAM plan approved by the Division and as follows:

TABLE 1 – PRIMARY – SAM COMPLIANCE INDICATOR

Indicator	SAM Indicative Monitor Output is the primary compliance indicator.
Applicability	The correlated output of the SAM indicative monitoring system at this unit will be compared to applicable SAM emission rates.
Monitoring Frequency, Data Collection, and Averaging Period	The continuous SAM indicative monitor output will be recorded as hourly averages and the data captured will be reduced to 3-hour rolling averages by a Performance Indicator data collection (PI) system.
Compliance Indication	Using the results of compliance demonstration stack tests performed pursuant to sub-Section 3., Testing Requirements , and average SAM indicative monitor output values collected during those tests, a correlation will be developed using regression analysis. Following development of the correlation, the SAM indicative monitor's output will be adjusted according to that correlation. The correlation adjusted SAM indicative monitor's output data will be reduced to 3-hour rolling averages and compared with the applicable SAM emission rate in sub-section 2.f., Emission Limitations . An excursion of SAM indicative monitor data is defined as occurring when the 3-hour rolling average of correlated SAM indicative monitor output values exceeds 90% of the applicable SAM rate.
QA/QC Practices and Criteria	A. The permittee shall follow the installation, calibration, and startup procedures of the SAM indicative monitoring system in accordance with good engineering practices. B. The permittee shall continue to calibrate and maintain the SAM indicative monitoring system in accordance with good engineering practices.
Recordkeeping	Hourly SAM indicative monitor output and 3-hour rolling averages of the SAM indicative monitor output will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	In response to an excursion, the permittee shall: A. Complete an inspection of the SAM indicative monitor system to determine any potential problems with data collection or validation and correct any revealed performance issues in an expedient manner: and B. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner. C. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM Indicative Monitor correlation and DSI per MWg relationships.

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

4. Specific Monitoring Requirements (Continued):

Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.
-----------	---

TABLE 2 – ALTERNATE – SAM COMPLIANCE INDICATOR

Indicator	DSI injection rates are the secondary compliance indicator.
Applicability	DSI data will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data. The DSI injection rates will be determined from data collected during compliance demonstration stack testing.
Monitoring Frequency, Data Collection, and Averaging Period Monitoring Methods	DSI rate will be used when valid SAM indicative monitor data is unavailable. DSI rate (lb/hr) will be monitored continuously, an average will be recorded hourly, and the data captured will be reduced to 3-hour rolling averages.
Compliance Indication	Minimum DSI rates will be determined using operational data gathered during compliance demonstration stack testing performed pursuant to sub-Section 3., <u>Testing Requirements</u> . If, based on performance tests, the current acceptable DSI indicator ranges need to be amended, the permittee shall submit the new ranges to the Division's Florence Regional Office for approval pursuant to consent decree requirements. An excursion of this section of the CAM plan will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data (i.e., malfunction or undergoing maintenance). An excursion of this section of the CAM plan will be defined if the three-hour rolling average of the DSI rates are below the minimum injection levels determined from the appropriate correlations. Current appropriate DSI indicator ranges are in the table below.
Practices and Criteria	<p>A. The permittee shall follow the installation, operation, and maintenance procedures of the DSI system in accordance with good engineering practices.</p> <p>B. The permittee shall continue to calibrate and maintain the DSI system in accordance with good engineering practices.</p>
Recordkeeping	Hourly DSI rate and 3-hour rolling averages of the DSI rate will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	<p>In response to an excursion measured by the DSI method, the permittee shall:</p> <p>A. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner.</p> <p>B. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.</p>

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

4. Specific Monitoring Requirements (Continued):

Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.
-----------	---

- k. If any of the events listed below occur at this unit, the permittee shall conduct a stack test within sixty (60) days of the relevant change at this unit and use the results of the stack test to adjust, as necessary, the CAM-determined sorbent injection rates for applicable load ranges for this Unit as described in sub-Sections 6.a., b., and c., **Specific Reporting Requirements:**
- i. The monthly average sulfur content of fuel burned at this Unit calculated at the end of any calendar month is greater than 20% above the highest sulfur content used at this Unit during the most recent stack test; or
 - ii. To the extent that the permittee reasonably expects any of the following changes to remain in effect for more than sixty (60) days:
 - a. The material replacement, or change in design, of SAM emissions control equipment at this unit;
 - b. A change in the type of fuel used at this unit to a fuel not permitted for use at this unit prior to August 21, 2013;
 - c. A change in the type of sorbent material used for SAM emission control at this unit; or
 - d. Any other change that the permittee would reasonably expect to result in an increase in the SAM emission rate prior to adjustment of control parameters.
 - iii. The permittee may rely on the results of a previously scheduled stack test in lieu of conducting an additional stack test if the previously scheduled stack test will occur during the sixty (60)-day period after implementation of the relevant change [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.c.].
- l. Following approval by the Kentucky Division for Air Quality (KDAQ) of a CAM plan revision submitted pursuant to sub-Section k., above, or sub-Sections 6.b. or c., **Specific Reporting Requirements,** at all times that this unit is in operation, the permittee shall monitor the continuous monitored indication of SAM and the sorbent injection rate for this unit for comparison to the applicable performance indicators determined in the CAM plan for the relevant load.
- i. Any excursion from the applicable CAM-determined performance indicators shall be addressed through compliance with the response protocols set forth in the CAM plan. Such an excursion shall not be considered a violation subject to stipulated penalties under the Consent Decree, notwithstanding any language in Section IX (Stipulated Penalties) of Civil Action Number 3:12-cv-00076-GFVT.

Permit Number: V-12-028 R1

Imber

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**4. Specific Monitoring Requirements (Continued):**

- ii. Any excursion from the CAM plan shall be subject to the applicable reporting requirements of Section VII of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.d.].
- m. The permittee shall maintain a daily log of the sorbent injection rates and other relevant operating data, including date, average daily unit load (MWg), operating hours for each day, sorbent injection flow rate (gallons per minute and tons per hour), and sorbent injection density (if injecting liquid sorbent) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.e.].
- n. The permittee shall determine the opacity of emissions from the stack by Method 9 at least once every fourteen (14) boiler operating days or more frequently if requested by the Division, to demonstrate compliance with the opacity standard [401 KAR 50:045, Section 1].

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain a file of all information reported in the quarterly summaries, in accordance with 401 KAR 61:005, Section 3(15) and 401 KAR 61:015, Section 6, with the exception that the records shall be maintained for a period of five (5) years.
- b. The permittee shall maintain records of:
 - i. Each fuel analysis;
 - ii. The rate of fuel burned for each fuel type, on a daily basis;
 - iii. The heating value, in Btu/lb, and ash content, in percent by weight, of fuel as-burned on a weekly basis;
 - iv. The average electrical output and the minimum and maximum hourly generation rate on a daily basis;
 - v. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted;
 - vi. Data collected either by CEMS or as necessary to convert monitoring data to the units of the applicable standard; and
 - vii. Results of all compliance tests [401 KAR 61:005, Section 3(15) and 401 KAR 61:015, Section 6].
- c. The permittee shall keep visible observation records and Method 9 observations in a designated logbook or electronic format. Records shall be maintained for five (5) years [401 KAR 52:020, Section 10].
- d. The permittee shall record the duration and type (cold, warm, or hot) of each start-up [401 KAR 52:020, Section 10].

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

5. Specific Recordkeeping Requirements (Continued):

- e. The permittee shall comply with all applicable recording provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division grants a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- f. The permittee shall retain, and shall instruct it's contractors and agents to preserve, all non-identical copies of documents, records, or other information (including documents, records, or other information in electronic form) in it's or it's contractors' or agents' possession or control that relate directly to the permittee's performance of it's obligations under Civil Action Number 3:12-cv-00076-GFVT for the following periods: (a) until August 21, 2023 for records concerning physical or operational changes undertaken in accordance with Section VI (Sulfuric Acid Mist Reduction and Controls) of Civil Action Number 3:12-cv-00076-GFVT; and (b) until August 21, 2020 for all other records. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, the permittee shall provide copies of documents, records, or other information required to be maintained under this Paragraph [Civil Action Number 3:12-cv-00076-GFVT, paragraph 74] or under sub-Section 4.m., **Specific Monitoring Requirements** [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee has submitted an initial CAM plan under 40 C.F.R. Part 64, to satisfy the SAM emission rates in paragraph 21.a. of the consent decree, with a copy sent to EPA contemporaneously with the submittal to KDAQ [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.a.].
- b. Within sixty (60) days of completion of each stack test required for this unit under sub-Section 3., **Testing Requirements**, the permittee shall submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan, that determines average continuous monitored indication of SAM values and minimum sorbent injection rates for applicable load ranges, as provided for in the CAM plan, based on the most recent stack test for this unit [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.i.].
- c. Notwithstanding sub-Sections a. and b. above, if the permittee demonstrates that the CAM-determined minimum sorbent injection rates for SAM control have remained consistent for five (5) consecutive testing periods, then the permittee may submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan that provides for the permittee to thereafter use the previously determined minimum sorbent injection rates without recalculating based on subsequent testing periods [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.iii.].
- d. The following minimum data requirements shall be maintained and furnished in the format specified by the Division:
 - i. The permittee shall submit for every calendar quarter, a written report of excess emissions and the nature and cause of the excess emissions if known. The averaging

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

6. Specific Reporting Requirements (Continued):

- period used for data reporting should correspond to the emission standard averaging period. All quarterly reports shall be submitted electronically or postmarked by the thirtieth (30th) day following the end of each calendar quarter.
- 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 format only.
 - 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 is required as specified by the Division whenever system repairs or adjustments have been made.
 - iv. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted [401 KAR 61:005, Section 3(15)].
- e. For particulate matter measurements, the report summary shall consist of the magnitude in actual pounds per million Btu (lb/MMBtu) of any rolling three (3)-hour average for particulate matter greater than the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous particulate matter measurements per hour. Any time period exempted shall be considered before determining the excess average of particulate matter [401 KAR 61:005, Section 3(15) and 40 CFR 64.9].
 - f. The permittee shall report the number of excursions (excluding exempted time periods) above the particulate matter standard, date and time of excursions, particulate matter value of the excursions, in lb/MMBtu, and percentage of the PM-CEMS data showing excursions above the applicable standard in each calendar quarter [401 KAR 61:005, Section 3(15) and 40 CFR 64.9].
 - g. The permittee shall report the number of excursions (excluding exempted time periods) above the SO₂ standard, date and time of excursions, SO₂ value of the excursions, in lb/MMBtu, and percentage of the SO₂ CEMS data showing excursions above the applicable standard in each calendar quarter [40 CFR 64.9].
 - h. For exceedances that occur as a result of start-up, the permittee shall report:
 - i. The type of start-up (cold, warm, or hot);
 - ii. Whether or not the duration of the start-up exceeded the manufacturer's recommended or typical historic durations, and if so, an explanation of how the start-up exceeded recommended or typical durations [401 KAR 52:020, Section 10].

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

6. Specific Reporting Requirements (Continued):

- i. The permittee shall comply with all applicable reporting provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until August 6, 2015 [Approval letter, February 5, 2015].
- j. Beginning sixty (60) days after the end of the second calendar quarter following August 21, 2013, and continuing on a semi-annual basis until termination of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to EPA a periodic progress report containing the following:
 - i. Information, including milestone dates, regarding the design and installation of the SAM control technologies required under Civil Action Number 3:12-cv-00076-GFVT, including any problems encountered or anticipated, together with implemented or proposed solutions;
 - ii. Any information indicating that the installation or commencement of operation of a SAM control device might be delayed, including the nature and cause of the delay, and any steps taken by the permittee to mitigate such delay;
 - iii. Beginning with the first report filed after June 30, 2013, information to demonstrate compliance with the relevant SAM emission rate during the preceding six (6)-month reporting period, including any compliance testing reports for SAM;
 - iv. Information regarding any events or changes identified in paragraph 23.c(i)-(ii) of Civil Action Number 3:12-cv-00076-GFVT;
 - v. Information regarding the status of any permit applications submitted or any permit applications required to be submitted under the Consent Decree, including the development of a CAM plan.

[Civil Action Number 3:12-cv-00076-GFVT, paragraph 24].

- k. In any periodic report submitted pursuant to Section VII. of Civil Action Number 3:12-cv-00076-GFVT, the permittee may incorporate by reference information previously submitted under its Title V permitting requirements, provided that the permittee attaches the Title V permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V Permit report that are responsive to the information required in the periodic report [Civil Action Number 3:12-cv-00076-GFVT, paragraph 25].
- l. Deviation Reports. In addition to the report required by sub-Section j. above, if the permittee violates or deviates from any provision of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to the United States a report on the violation or deviation within ten (10) business days after the permittee knew or should have known of the event. In the report, the permittee shall explain the cause or causes of the violation or deviation and any measures taken or to be taken by the permittee to cure the reported violation or deviation or to prevent

Permit Number: V-12-028 R1

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

6. Specific Reporting Requirements (Continued):

such violation or deviations in the future. If at any time the provisions of Civil Action Number 3:12-cv-00076-GFVT are included in the Title V Permit, consistent with the requirements for such inclusion in Civil Action Number 3:12-cv-00076-GFVT, then the deviation reports required under the applicable Title V regulations shall be deemed to satisfy all the requirements of this paragraph, provided that such reports are also submitted to the United States [Civil Action Number 3:12-cv-00076-GFVT, paragraph 26].

- m. All reports required by Civil Action Number 3:12-cv-00076-GFVT shall be submitted to the persons designated in Section XVII (Notices) of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 27].

7. Specific Control Equipment Operating Conditions:

- a. The electrostatic precipitator/pulse jet fabric filter, wet limestone forced-oxidation sulfur dioxide scrubber, low nitrogen oxides burners, selective catalytic reduction unit, and dry sorbent injection system shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the electrostatic precipitator/pulse jet fabric filter, wet limestone forced-oxidation sulfur dioxide scrubber, low nitrogen oxides burners, selective catalytic reduction unit, and dry sorbent injection system shall be maintained [40 CFR 63.10032 and 401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

Emission Unit 02: Indirect Heat Exchanger

Description:

Pulverized coal-fired, dry bottom, tangentially-fired boiler

Construction commenced: prior to September 18, 1978

Number two fuel oil used for startups and stabilization

Maximum continuous rating: 5,500 MMBtu/hour

Control Equipment:

Electrostatic Precipitator (to be removed in 2015)

Low Nitrogen Oxides Burners

Wet Limestone Forced-Oxidation Sulfur Dioxide Scrubber (WFGD) GH2

Dry Sorbent Injection SAM Control

Dry Sorbent Injection Hg Control and Pulse-Jet Fabric Filter (to be installed in 2015)

Stack: EO3, shared with EU 03

APPLICABLE REGULATIONS

401 KAR 51:160, NO_x Requirements for Large Utility and Industrial Boilers

401 KAR 52:060, Acid rain permits (See Section J)

401 KAR 59:005, General requirements

40 CFR 60, Subpart D, Standards of performance for fossil-fuel-fired steam generators

40 CFR 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal and Oil-fired Electric Utility Steam Generating Units

40 CFR Part 64, Compliance Assurance Monitoring (for SO₂, SAM and PM)

40 CFR Part 75, Continuous Emission Monitoring

40 CFR 97, Subpart AAAAA, TR NO_x Annual Trading Program (See Section L)

40 CFR 97, Subpart BBBB, TR NO_x Ozone Season Trading Program(See Section L)

40 CFR 97, Subpart CCCCC TR SO₂ Group 1 Trading Program (See Section L)

APPLICABLE CONSENT DECREES:

Civil Action Number 3:12-cv-00076-GFVT, filed August 21, 2013

1. Operating Limitations:

- a. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

Permit Number: V-12-028 R1

Imber

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**1. Operating Limitations (Continued):**

- b. Beginning no later than December 20, 2012, the permittee will continuously operate the existing SAM controls at Ghent Station Units 1, 2, 3 and 4 [Civil Action Number 3:12-cv-00076-GFVT, paragraph 19].

Compliance Demonstration Method:

The permittee shall demonstrate compliance according to sub-Section 4.n., **Specific Monitoring Requirements.**

- c. By no later than June 30, 2013, the permittee shall install and continuously operate a new dry sorbent SAM emission control system at Unit 2 designed to reduce SAM emissions to achieve a SAM emissions rate of no greater than 3 ppmvd (at 3% O₂). The permittee shall take the following steps in procuring the new sorbent control system:
- i. The permittee shall obtain a written vendor assurance/guarantee that the new sorbent control system is designed to control SAM emissions at Unit 2 to levels no greater than 3 ppmvd (at 3% O₂) taking into account all anticipated unit operating parameters; and
 - ii. The permittee shall ensure that the new sorbent control system includes sorbent milling capabilities and shall consider the use of sorbent milling to enhance SAM emissions reduction [Civil Action Number 3:12-cv-00076-GFVT, paragraph 21.b.].

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed 0.10 lb/MMBtu based on a three (3)-hour average [40 CFR 60.42(a)(1)].

Compliance Demonstration Method:

Compliance with the particulate matter emission limit shall be demonstrated by performance testing as required in sub-Section 3.a., **Testing Requirements.**

- b. Emissions shall not exceed 20 percent opacity based on a six (6)-minute average except that a maximum of 27 percent opacity shall be permissible for not more than one (1) six (6)-minute period in any sixty (60) consecutive minutes [40 CFR 60.42(a)(2)].

Compliance Demonstration Method:

Compliance with the opacity standard shall be demonstrated by Method 9 testing as required in sub-Section 4.o., **Specific Monitoring Requirements.**

- c. Sulfur dioxide emissions shall not exceed 1.2 lbs/MMBtu based on a three (3)-hour average [40 CFR 60.43(a)(2)].

Compliance Demonstration Method:

Compliance with SO₂ emission limits shall be demonstrated by SO₂ CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

- d. Nitrogen oxides (NO_x) emissions expressed as nitrogen dioxide shall not exceed 0.70 lb/MMBtu based on a three (3)-hour average [40 CFR 60.44(a)(3)].

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**2. Emission Limitations (Continued):****Compliance Demonstration Method:**

Compliance with NO_x emission limits shall be demonstrated by NO_x CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

- e. Commencing June 30, 2013, the permittee shall achieve and maintain compliance with a SAM emission rate of 4 ppmvd (at 3% O₂) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 21.c.]. If the permittee installs selective catalytic reduction (SCR) on this unit in order to control emissions of NO_x, the permittee shall achieve and maintain compliance with a permanent SAM emission rate of 5 ppmvd (at 3% O₂) following commencement of operation of the SCR [Civil Action Number 3:12-cv-00076-GFVT, paragraph 21.d.].

Compliance Demonstration Method:

Compliance with the SAM emission rate shall be demonstrated through the use of stack tests as described in sub-Section 3., **Testing Requirements.**

- f. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

General MATS Compliance Demonstration Method:

- i. The permittee shall comply with 40 CFR 63, Subpart UUUUU, no later than April 16, 2015 [40 CFR 63.9984(b)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- ii. The permittee shall meet the notification requirements in 40 CFR 63.10030 according to the schedule in 40 CFR 63.10030 and in 40 CFR 63, Subpart A. Some of the notifications must be submitted before compliance with the emission limits and work practice standards in 40 CFR 63, Subpart UUUUU is required [40 CFR 63.9984(c)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- iii. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than one-hundred-eighty (180) days after the applicable date in paragraph (b) or (c) of 40 CFR 63.9984 [40 CFR 63.9984(f)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- iv. The permittee shall demonstrate continuous compliance according to 40 CFR 63.10000 through 40 CFR 63.10023, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

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

3. Testing Requirements:

- a. If no additional stack tests are performed pursuant to sub-Section 4.f., **Specific Monitoring Requirements**, the permittee shall conduct a performance test for particulate matter emissions by the start of the fourth (4th) year of the term of this permit to demonstrate compliance with the applicable standard within the life of the permit. This requirement may be satisfied with the successful completion of testing performed in conjunction with PM CEMS compliance certification/recertification when approved by the Division [401 KAR 50:045, Section 1].
- b. Testing shall be conducted in accordance with 40 CFR 60.46, 401 KAR 50:045, and 40 CFR 64.4(c)(1). Testing shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit [401 KAR 50:045, Section 5].
- c. The permittee shall comply with all applicable provisions of 40 CFR 63.10005 through 40 CFR 63.10009 and 40 CFR 63.10011, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- d. Compliance with each SAM emission rate set forth in sub-Sections 2.e., **Emission Limitations**, shall be determined through stack tests conducted pursuant to the most recent procedures set forth in Appendix A of Civil Action Number 3:12-cv-00076-GFVT. Such stack tests shall be conducted under representative unit operating conditions, taking into account fuel sulfur content, load, and other parameters known to impact SAM emissions [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.a.].
- e. The permittee shall conduct a bi-annual stack test using procedures set forth in sub-Section 3., **Testing Requirements**, at this unit for the two (2) years following August 21, 2013. If, after the initial two (2)-year period of bi-annual stack tests, the permittee is able to demonstrate during any subsequent stack test that the SAM emission rate for this unit is less than 80% of the permanent SAM emission rate for this unit, then the permittee may reduce the frequency of the stack tests required for this unit under the Consent Decree to an annual basis until termination of the Consent Decree [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.b.].
- f. The permittee may petition EPA to change the annual stack test and reporting requirements if it can demonstrate that appropriate continuous emissions devices for SAM are available, but the permittee shall submit SAM emissions control parameters and data on at least an annual basis [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.c.].

4. Specific Monitoring Requirements:

- a. CEMS shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions [40 CFR 60.45(a)]. The permittee shall ensure the CEMS are in compliance with, and the permittee shall comply with, the requirements of 40 CFR 60, Appendix B [401 KAR 59:005, Section 4(1)] and 40 CFR 75 [401 KAR 52:020, Section 10].

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

4. Specific Monitoring Requirements (Continued):

- b. CEMS shall be used to satisfy the CAM requirements for sulfur dioxide and nitrogen oxides. When CEMS data shows excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and the CEMS and take any corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- c. Methods 6, 7, and 3B of 40 CFR 60, Appendix A, as applicable, shall be used for the performance evaluations of SO₂ CEMS. Acceptable alternative methods for Methods 6, 7, and 3B of Appendix A are given in 40 CFR 60.46(d) [40 CFR 60.45(c)(1)].
- d. Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of 40 CFR 60, Appendix B [40 CFR 60.45(c)(2)].
- e. The span values for the CEMS measuring sulfur dioxide and nitrogen oxides emissions shall be in accordance with 40 CFR 60.45(c)(3) and (4).
- f. CEMS shall be installed, calibrated, maintained, and operated for measuring particulate matter emissions. The PM-CEMS shall comply with Appendix B to 40 CFR 60 [401 KAR 59:005, Section 4(1)]. The permittee must follow the most current applicable compliance and monitoring provisions in 40 CFR 60.48Da and 40 CFR 60.49Da, which includes 40 CFR 60, Appendix F, Procedure 2 [40 CFR 60.45(g)(4)].
- g. CEMS shall be used to satisfy the CAM requirements for PM. When CEMS data shows excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and CEMS and take any corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- h. Continuous emission monitoring data shall be converted into the units of applicable standards using the conversion procedure described in 40 CFR 60.45(e).
- i. The permittee shall monitor the duration of each start-up [401 KAR 52:020, Section 10].
- j. The permittee shall comply with all applicable continuous monitoring requirements of 40 CFR 63.10010, 40 CFR 63.10020 and 40 CFR 63.10021, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- k. The permittee shall implement CAM for SAM at EU 02 based on the most recent CAM plan approved by the Division and as follows:

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

4. Specific Monitoring Requirements (Continued):

TABLE 1 – PRIMARY - SAM COMPLIANCE INDICATOR

Indicator	SAM Indicative Monitor Output is the primary compliance indicator.
Applicability	The correlated output of the SAM indicative monitoring system at this unit will be compared to applicable SAM rates.
Monitoring Frequency, Data Collection, and Averaging Period	The continuous SAM indicative monitor output will be recorded as hourly averages and the data captured will be reduced to 3-hour rolling averages by a performance indicator data collection (PI) system.
Compliance Indication	Using the results of compliance demonstration stack tests performed pursuant to sub-Section 3., Testing Requirements , and average SAM indicative monitor output values collected during those tests, a correlation will be developed using regression analysis. Following development of the correlation, the SAM indicative monitor's output will be adjusted according to that correlation. The correlation adjusted SAM indicative monitor's output data will be reduced to 3-hour rolling averages and compared with the applicable SAM emission rate in sub-section 2.e., Emission Limitations . An excursion of SAM indicative monitor data is defined as occurring when the 3-hour rolling average of correlated SAM indicative monitor output values exceeds 90% of the applicable SAM emission rate.
QA/QC Practices and Criteria	<p>A. The permittee shall follow the installation, calibration, and startup procedures of the SAM indicative monitoring system in accordance with good engineering practices.</p> <p>B. The permittee shall continue to calibrate and maintain the SAM indicative monitoring system in accordance with good engineering practices.</p>
Recordkeeping	Hourly SAM indicative monitor output and 3-hour rolling averages of the SAM indicative monitor output will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	<p>In response to an excursion, the permittee shall:</p> <p>A. Complete an inspection of the SAM indicative monitor system to determine any potential problems with data collection or validation and correct any revealed performance issues in an expedient manner, and</p> <p>B. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner.</p> <p>C. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.</p>
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

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

4. Specific Monitoring Requirements (Continued):

TABLE 2 – ALTERNATE - SAM COMPLIANCE INDICATOR

Indicator	DSI Injection rates are the secondary compliance indicator.
Applicability	DSI data will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data. The DSI injection rates will be determined from data collected during compliance demonstration stack testing.
Monitoring Frequency, Data Collection, and Averaging Period Monitoring Methods	DSI rate will be used when valid SAM indicative monitor data is unavailable. DSI rate (lb/hr) will be monitored continuously, an average will be recorded hourly, and the data captured will be reduced to 3-hour rolling averages.
Compliance Indication	Minimum DSI rates will be determined using operational data gathered during compliance demonstration stack testing performed pursuant to sub-Section 3., <u>Testing Requirements</u> . If, based on performance tests, the current acceptable DSI indicator ranges need to be amended, the permittee shall submit the new ranges to the Division's Florence Regional Office for approval pursuant to consent decree requirements. An excursion of this section of the CAM plan will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data (i.e., malfunction or undergoing maintenance). An excursion of this section of the CAM plan will be defined if the three-hour rolling average of the DSI rates are below the minimum injection levels determined from the appropriate correlations. Current appropriate DSI indicator ranges are in the table below.
QA/QC Practices and Criteria	A. The permittee shall follow the installation, operation, and maintenance procedures of the DSI system in accordance with good engineering practices. B. The permittee shall continue to calibrate and maintain the DSI system in accordance with good engineering practices.
Recordkeeping	Hourly DSI rate and 3-hour rolling averages of the DSI rate will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	In response to an excursion measured by the DSI method, the permittee shall: A. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner. B. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

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

4. Specific Monitoring Requirements (Continued):

1. If any of the events listed below occur at this unit, the permittee shall conduct a stack test consistent with sub-Section 3., Testing Requirements, within sixty (60) days of the relevant change at this unit and use the results of the stack test to adjust, as necessary, the CAM-determined sorbent injection rates for applicable load ranges for this unit described in sub-Sections 6.a., b., and c., Specific Reporting Requirements:
 - i. The monthly average sulfur content of fuel burned at this unit calculated at the end of any calendar month is greater than 20% above the highest sulfur content used at this unit during the most recent stack test; or
 - ii. To the extent that the permittee reasonably expects any of the following changes to remain in effect for more than sixty (60) days:
 - a. The material replacement, or change in design, of SAM emissions control equipment at this unit.
 - b. A change in the type of fuel used at this unit to a fuel not permitted for use at this unit prior to August 21, 2013; or
 - c. A change in the type of sorbent material used for SAM emission control at this unit.
 - d. Any other change that the permittee would reasonably expect to result in an increase in the SAM emission rate prior to adjustment of control parameters.
 - iii. The permittee may rely on the results of a previously scheduled stack test in lieu of conducting an additional stack test if the previously scheduled stack test will occur during the sixty (60)-day period after implementation of the relevant change [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.c.].
- m. Following approval by KDAQ of a CAM plan revision submitted pursuant to sub-Section 1., above, or sub-Sections 6.b. or c., Specific Reporting Requirements, at all times that this unit is in operation, the permittee shall monitor the continuous monitored indication of SAM and the sorbent injection rate for this unit for comparison to the applicable performance indicators determined in the CAM plan for the relevant load.
 - i. Any excursion from the applicable CAM-determined performance indicators shall be addressed through compliance with the response protocols set forth in the CAM plan. Such an excursion shall not be considered a violation subject to stipulated penalties under the Consent Decree, notwithstanding any language in Section IX (Stipulated Penalties) of Civil Action Number 3:12-cv-00076-GFVT.
 - ii. Any excursions from the CAM plan shall be subject to the applicable reporting requirements of Section VII of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.d.].

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

4. Specific Monitoring Requirements (Continued):

- n. The permittee shall maintain a daily log of the sorbent injection rates and other relevant operating data, including date, average daily unit load (MWg), operating hours for each day, sorbent injection flow rate (gallons per minute and tons per hour), and sorbent injection density (if injecting liquid sorbent) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.e.].
- o. The permittee shall determine the opacity of emissions from the stack by Method 9 in accordance with the schedule prescribed in 40 CFR 60.45(b)(7). Method 9 testing may also be requested more frequently by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005 recorded in a permanent form suitable for inspection [401 KAR 59:005, Section 3(4)].
- b. The permittee shall 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 59:005, Section 3(2)].
- c. The permittee shall record the type (cold, warm, or hot) of each start-up [401 KAR 52:020, Section 10].
- d. The permittee shall maintain records of:
 - i. Each fuel analysis;
 - ii. The rate of fuel burned for each fuel type, on a daily basis;
 - iii. The heating value, in Btu/lb, and ash content, in percent by weight, of fuel as-burned on a weekly basis;
 - iv. The average electrical output and the minimum and maximum hourly generation rate on a daily basis;
 - v. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted;
 - vi. Data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard; and
 - vii. Results of all compliance tests [401 KAR 52:020, Section 10].

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

5. Specific Recordkeeping Requirements (Continued):

- e. For each Method 9 test, the permittee shall maintain records of the date and time intervals of each test; name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and copies of all visible emission observer opacity field data sheets [40 CFR 60.45(h)(1)].
- f. The permittee shall keep visible observation records and Method 9 observations in a designated logbook or electronic format. Records shall be maintained for five (5) years [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable recording provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- h. The permittee shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, that relate directly to the permittee's performance of its obligations under Civil Action Number 3:12-cv-00076-GFVT for the following periods: (a) until August 21, 2023 for records concerning physical or operational changes undertaken in accordance with Section VI (Sulfuric Acid Mist Reduction and Controls) of Civil Action Number 3:12-cv-00076-GFVT; and (b) until August 21, 2020 for all other records. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, the permittee shall provide copies of documents, records, or other information required to be maintained under this paragraph [Civil Action Number 3:12-cv-00076-GFVT, paragraph 74] or under sub-Section 4.m., **Specific Monitoring Requirements** [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee has submitted an initial CAM plan under 40 C.F.R. Part 64, to satisfy the SAM emission rates in paragraph 21.a. of the consent decree, with a copy sent to EPA contemporaneously with the submittal to KDAQ [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.a.].
- b. Within sixty (60) days of completion of the second stack test required for this unit under paragraph 22.b. of Civil Action Number 3:12-cv-00076-GFVT and each subsequent stack test for this unit, the permittee shall submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan that determines average continuous monitored indication of SAM values and minimum sorbent injection rates for applicable load ranges, as provided for in the CAM plan [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.ii.].
- c. Notwithstanding sub-Sections a. and b. above, if the permittee demonstrates that the CAM-determined minimum sorbent injection rates for SAM control have remained

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

6. Specific Reporting Requirements (Continued):

consistent for five (5) consecutive testing periods, then the permittee may submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan that provides for the permittee to thereafter use the previously determined minimum sorbent injection rates without recalculating based on subsequent testing periods [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.iii.].

- d. Excess emission and monitoring system performance (MSP) reports shall be submitted to the Administrator semiannually for each six (6)-month period in the calendar year. All semiannual reports shall be submitted electronically or postmarked by the thirtieth (30th) day following the end of each six (6)-month period. Periods of excess emissions and monitoring systems downtime that shall be reported are defined as follows:
 - i. For particulate matter measurements, the report summary shall consist of the magnitude in actual pounds per million Btu (lb/MMBtu) of any rolling three (3)-hour average of particulate matter greater than the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous particulate matter measurements per hour. Any time period exempted shall be considered before determining the excess average of particulate matter.
 - ii. Excess emissions are defined as any six (6)-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one (1) six (6)-minute average of up to 27 percent opacity need not be reported [40 CFR 60.45(g)(1)].
 - iii. Excess emissions for SO₂ are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) of SO₂ as measured by a CEMS exceed the applicable standard in sub-Section 2.c., **Emission Limitations** [40 CFR 60.45(g)(2)].
 - iv. Excess emissions for NO_x are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) exceed the applicable standards in sub-Section 2.d., **Emission Limitations** [40 CFR 60.45(g)(3)].
- e. Each excess emission and MSP report shall include the following information:
 - i. The magnitude of the excess emission computed in accordance with 40 CFR 60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
 - ii. All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.
 - iii. Specific identification of each period of excess emissions that occurs during startups,

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

6. Specific Reporting Requirements (Continued):

shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

- iv. 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.
- v. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted.

[40 CFR 60.7(c), referenced by 40 CFR 60.45(g)].

- f. For exceedances that occur as a result of start-up, the permittee shall report the type of start-up (cold, warm, or hot); and whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of how the start-up exceeded recommended or typical durations [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable reporting provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- h. Beginning sixty (60) days after the end of the second calendar quarter following August 21, 2013, and continuing on a semi-annual basis until termination of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to EPA a periodic progress report containing the following:
 - i. Information, including milestone dates, regarding the design and installation of the SAM control technologies required under Civil Action Number 3:12-cv-00076-GFVT, including any problems encountered or anticipated, together with implemented or proposed solutions;
 - ii. Any information indicating that the installation or commencement of operation of a SAM control device might be delayed, including the nature and cause of the delay, and any steps taken by the permittee to mitigate such delay;
 - iii. Beginning with the first report filed after June 30, 2013, information to demonstrate compliance with the relevant SAM emission rate during the preceding six (6)-month reporting period, including any compliance testing reports for SAM;
 - iv. Information regarding any events or changes identified in paragraph 23.c.(i)-(ii) of Civil Action Number 3:12-cv-00076-GFVT;
 - v. Information regarding the status of any permit applications submitted or any permit applications required to be submitted under the Consent Decree, including the

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

6. Specific Reporting Requirements (Continued):

development of a CAM plan.

[Civil Action Number 3:12-cv-00076-GFVT, paragraph 24].

- i. In any periodic report submitted pursuant to Section VII. of Civil Action Number 3:12-cv-00076-GFVT, the permittee may incorporate by reference information previously submitted under its Title V permitting requirements, provided that the permittee attaches the Title V permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the periodic report [Civil Action Number 3:12-cv-00076-GFVT, paragraph 25].
- j. Deviation Reports. In addition to the report required by sub-Section h. above, if the permittee violates or deviates from any provision of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to the United States a report on the violation or deviation within ten (10) business days after the permittee knew or should have known of the event. In the report, the permittee shall explain the cause or causes of the violation or deviation and any measures taken or to be taken by the permittee to cure the reported violation or deviation or to prevent such violation or deviations in the future. If at any time the provisions of Civil Action Number 3:12-cv-00076-GFVT are included in the Title V permit, consistent with the requirements for such inclusion in Civil Action Number 3:12-cv-00076-GFVT, then the deviation reports required under the applicable Title V regulations shall be deemed to satisfy all the requirements of this sub-Section, provided that such reports are also submitted to the United States [Civil Action Number 3:12-cv-00076-GFVT, paragraph 26].
- k. All reports required by Civil Action Number 3:12-cv-00076-GFVT shall be submitted to the persons designated in Section XVII (Notices) of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 27].

7. Specific Control Equipment Operating Conditions:

- a. The electrostatic precipitator/pulse jet fabric filter, low nitrogen oxides burners, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the electrostatic precipitator/pulse jet fabric filter, low nitrogen oxide burners, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be maintained [40 CFR 63.10032 and 401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

Emission Unit 03: Indirect Heat Exchanger

Description:

Pulverized coal-fired unit, dry bottom, wall-fired boiler
 Construction commenced: prior to September 18, 1978
 Number two fuel oil used for startup and stabilization
 Maximum continuous rating: 5,500 MMBtu/hour

Control Equipment:

Electrostatic Precipitator
 Low Nitrogen Oxides Burners with Overfire Air
 Selective Catalytic Reduction (SCR)
 Wet Limestone Forced-Oxidation Sulfur Dioxide Scrubber (WFGD) GH3
 Dry Sorbent Injection SAM Control
 Dry Sorbent Injection Hg Control and Pulse-Jet Fabric Filter (to begin construction in 2012)

Stack: EO3, shared with EU 02

APPLICABLE REGULATIONS

401 KAR 51:160, NO_x Requirements for Large Utility and Industrial Boilers

401 KAR 52:060, Acid rain permits (See Section J)

401 KAR 59:005, General requirements

40 CFR 60, Subpart D, Standards of performance for fossil-fuel-fired steam generators

40 CFR 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal and Oil-fired Electric Utility Steam Generating Units

40 CFR Part 64, Compliance Assurance Monitoring (for PM, SO₂, SAM and NO_x)

40 CFR Part 75, Continuous Emission Monitoring

40 CFR 97, Subpart AAAAA, TR NO_x Annual Trading Program (See Section L)

40 CFR 97, Subpart BBBB, TR NO_x Ozone Season Trading Program (See Section L)

40 CFR 97, Subpart CCCCC TR SO₂ Group 1 Trading Program (See Section L)

APPLICABLE CONSENT DECREES:

Civil Action Number 3:12-cv-00076-GFVT, filed August 21, 2013

1. Operating Limitations:

- a. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015 [40 CFR 63.9984(b)]. However, the Division has granted a compliance

Permit Number: V-12-028 R1

Imber

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**1. Operating Limitations (Continued):**

extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

- b. Beginning no later than December 20, 2012, the permittee will continuously operate the existing SAM controls at Ghent Station Units 1, 2, 3 and 4 [Civil Action Number 3:12-cv-00076-GFVT, paragraph 19]. By no later than August 31, 2012, the permittee will install and continuously operate enhanced sorbent injection controls to reduce SAM emissions with the goal of achieving a SAM emission rate of no greater than 5 ppmvd (at 3% O₂) for this unit [Civil Action Number 3:12-cv-00076-GFVT, paragraph 20.a.].

Compliance Demonstration Method:

The permittee shall demonstrate compliance according to sub-Section 4.n., **Specific Monitoring Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed 0.10 lb/MMBtu based on a three (3)-hour average [40 CFR 60.42(a)(1)].

Compliance Demonstration Method:

Compliance with the particulate matter emission limit shall be demonstrated by performance testing as required in sub-Section 3.a., **Testing Requirements.**

- b. Emissions shall not exceed 20 percent opacity based on a six (6)-minute average except that a maximum of 27 percent opacity shall be permissible for not more than one (1) six (6)-minute period in any sixty (60) consecutive minutes [40 CFR 60.42(a)(2)].

Compliance Demonstration Method:

Compliance with the opacity standard shall be demonstrated by Method 9 testing as required in sub-Section 4.o., **Specific Monitoring Requirements.**

- c. Sulfur dioxide emissions shall not exceed 1.2 lbs/MMBtu based on a three (3)-hour average [40 CFR 60.43(a)(2)].

Compliance Demonstration Method:

Compliance with SO₂ emission limits shall be demonstrated by SO₂ CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

- d. Nitrogen oxides emissions expressed as nitrogen dioxide shall not exceed 0.70 lb/MMBtu based on a three (3)-hour average [40 CFR 60.44(a)(3)].

Compliance Demonstration Method:

Compliance with NO_x emission limits shall be demonstrated by NO_x CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

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

2. Emission Limitations (Continued):

- e. Between August 31, 2012 and June 30, 2014, emissions of SAM shall not exceed 7 ppmvd (at 3% O₂). After June 30, 2014, emissions of SAM shall not exceed 5 ppmvd (at 3% O₂) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 20.b.ii. and 20.c.ii.].

Compliance Demonstration Method:

Compliance with the SAM emission rate shall be demonstrated through the use of stack tests described in sub-Sections 3., Testing Requirements.

- f. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015 [40 CFR 63.9984(b)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

General MATS Compliance Demonstration Method:

- i. The permittee shall comply with 40 CFR 63, Subpart UUUUU, no later than April 16, 2015 [40 CFR 63.9984(b)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- ii. The permittee shall meet the notification requirements in 40 CFR 63.10030 according to the schedule in 40 CFR 63.10030 and in 40 CFR 63, Subpart A. Some of the notifications must be submitted before compliance with the emission limits and work practice standards in 40 CFR 63, Subpart UUUUU is required [40 CFR 63.9984(c)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- iii. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than one-hundred-eighty (180) days after the applicable date in sub-Section (b) or (c) of 40 CFR 63.9984 [40 CFR 63.9984(f)]. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- iv. The permittee shall demonstrate continuous compliance according to 40 CFR 63.10000 through 40 CFR 63.10023, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].

3. Testing Requirements:

- a. If no additional stack tests are performed pursuant to sub-Section 4.f., Specific Monitoring Requirements, the permittee shall conduct a performance test for particulate matter emissions by the start of the fourth (4th) year of the term of this permit to demonstrate compliance with the applicable standard within the life of the permit. This requirement may be satisfied with the successful completion of particulate matter testing performed in conjunction with PM CEMS compliance certification/recertification when approved by the Division [401 KAR 50:045, Section 1].

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

3. Testing Requirements (Continued):

- b. Testing shall be conducted in accordance with 40 CFR 60.46, 401 KAR 50:045, and 40 CFR 64.4(c)(1). Testing shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit [401 KAR 50:045, Section 5].
- c. The permittee shall comply with all applicable provisions of 40 CFR 63.10005 through 40 CFR 63.10009 and 40 CFR 63.10011, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- d. Compliance with the SAM emission rate set forth in sub-Section 2.e., **Emission Limitations**, shall be determined through stack tests conducted pursuant to the most recent procedures set forth in Appendix A of Civil Action Number 3:12-cv-00076-GFVT. Such stack tests shall be conducted under representative unit operating conditions, taking into account fuel sulfur content, load, and other parameters known to impact SAM emissions [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.a.].
- e. The permittee shall conduct a bi-annual stack test at this unit for the two (2) years following August 21, 2013. If, after the initial two (2)-year period of bi-annual stack tests, the permittee is able to demonstrate during any subsequent stack test that the same emission rate for the unit is less than 80% of the permanent SAM Emission rate for this unit, then the permittee may reduce the frequency of the stack tests required for this unit under the Consent Decree to an annual basis until termination of the Consent Decree [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.b.].
- f. The permittee may petition EPA to change the annual stack test and reporting requirements if it can demonstrate that appropriate continuous emissions devices for SAM are available, but the permittee shall submit SAM emissions control parameters and data on at least an annual basis [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.c.].

4. Specific Monitoring Requirements:

- a. CEMS shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions [40 CFR 60.45(a)]. The permittee shall ensure the CEMS are in compliance with, and the permittee shall comply with, the requirements of 40 CFR 60, Appendix B [401 KAR 59:005, Section 4(1)] and 40 CFR 75 [401 KAR 52:020, Section 10].
- b. CEMS shall be used to satisfy the CAM requirements for sulfur dioxide and nitrogen oxides. When CEMS data shows excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and CEMS and take corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- c. Methods 6, 7, and 3B of 40 CFR 60, Appendix A, as applicable, shall be used for the performance evaluations of SO₂ and NO_x CEMS. Acceptable alternative methods for

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

4. Specific Monitoring Requirements (Continued):

Methods 6, 7, and 3B of Appendix A are given in 40 CFR 60.46(d) [40 CFR 60.45(c)(1)].

- d. Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of 40 CFR 60, Appendix B [40 CFR 60.45(c)(2)].
- e. The span values for the CEMS measuring sulfur dioxide and nitrogen oxides emissions shall be in accordance with 40 CFR 60.45(c)(3) and (4).
- f. CEMS shall be installed, calibrated, maintained, and operated for measuring particulate matter emissions. The PM-CEMS shall comply with Appendix B to 40 CFR 60 [401 KAR 59:005, Section 4(1)]. The permittee must follow the most current applicable compliance and monitoring provisions in 40 CFR 60.48Da and 40 CFR 60.49Da, which includes 40 CFR 60, Appendix F, Procedure 2 [40 CFR 60.45(g)(4)].
- g. CEMS shall be used to satisfy the CAM requirements for PM. When CEMS data show excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and CEMS and take any corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- h. Continuous emission monitoring data shall be converted into the units of applicable standards using the conversion procedure described in 40 CFR 60.45(e).
- i. The permittee shall monitor the duration of each start-up [401 KAR 52:020, Section 10].
- j. The permittee shall comply with all applicable continuous monitoring requirements of 40 CFR 63.10010, 40 CFR 63.10020 and 40 CFR 63.10021, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- k. The permittee shall implement CAM for SAM at EU 03 based on the most recent CAM plant approved by the Division and as follows:

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

4. Specific Monitoring Requirements (Continued):

TABLE 1 – PRIMARY - SAM COMPLIANCE INDICATOR

Indicator	SAM indicative monitor output is the primary compliance indicator.
Applicability	The correlated output of the SAM indicative monitoring system at each location will be compared to applicable SAM emission rates.
Monitoring Frequency, Data Collection, and Averaging Period	The continuous SAM indicative monitor output will be recorded as hourly averages and the data captured will be reduced to 3-hour rolling averages by a performance indicator data collection (PI) system.
Compliance Indication	Using the results of compliance demonstration stack tests performed pursuant to sub-Section 3., <u>Testing Requirements</u> , and average SAM indicative monitor output values collected during those tests, a correlation will be developed using regression analysis. Following development of the correlation, the SAM indicative monitor's output will be adjusted according to that correlation. The correlation adjusted SAM indicative monitor's output data will be reduced to 3-hour rolling averages and compared with the applicable SAM emission rate in sub-section 2.e., <u>Emission Limitations</u> . An excursion of SAM indicative monitor data is defined as occurring when the 3-hour rolling average of correlated SAM indicative monitor output values exceeds 90% of the applicable SAM rate.
QA/QC Practices and Criteria	<p>A. The permittee shall follow the installation, calibration, and startup procedures of the SAM indicative monitoring system in accordance with good engineering practices.</p> <p>B. The permittee shall continue to calibrate and maintain the SAM indicative monitoring system in accordance with good engineering practices.</p>
Recordkeeping	Hourly SAM indicative monitor output and 3-hour rolling averages of the SAM indicative monitor output will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	<p>In response to an excursion, the permittee shall:</p> <p>A. Complete an inspection of the SAM indicative monitor system to determine any potential problems with data collection or validation and correct any revealed performance issues in an expedient manner, and</p> <p>B. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner.</p> <p>C. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.</p>
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

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

4. Specific Monitoring Requirements (Continued):

TABLE 2 – ALTERNATE SAM COMPLIANCE INDICATOR

Indicator	DSI injection rates are the secondary compliance indicator.
Applicability	DSI data will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data. The DSI injection rates will be determined from data collected during compliance demonstration stack testing.
Monitoring Frequency, Data Collection, and Averaging Period Monitoring Methods	DSI rate will be used when valid SAM indicative monitor data is unavailable. DSI rate (lb/hr) will be monitored continuously, an average will be recorded hourly, and the data captured will be reduced to 3-hour rolling averages.
Compliance Indication	Minimum DSI rates will be determined using operational data gathered during compliance demonstration stack testing performed pursuant to sub-Section 3., Testing Requirements . If, based on performance tests, the current acceptable DSI indicator ranges need to be amended, the permittee shall submit the new ranges to the Division's Florence Regional Office for approval pursuant to consent decree requirements. An excursion of this section of the CAM plan will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data (i.e., malfunction or undergoing maintenance). An excursion of this section of the CAM plan will be defined if the three-hour rolling average of the DSI rates are below the minimum injection levels determined from the appropriate correlations. Current appropriate DSI indicator ranges are in the table below.
QA/QC Practices and Criteria	A. The permittee shall follow the installation, operation, and maintenance procedures of the DSI system in accordance with good engineering. B. The permittee shall continue to calibrate and maintain the DSI system in accordance with good engineering practices.
Recordkeeping	Hourly DSI rate and 3-hour rolling averages of the DSI rate will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	In response to an excursion measured by the DSI method, the permittee shall: A. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner. B. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

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

4. Specific Monitoring Requirements (Continued):

- l. If any of the events listed below occur at this unit, the permittee shall conduct a stack test consistent with sub-Section 3., Testing Requirements, within sixty (60) days of the relevant change at this unit and use the results of the stack test to adjust, as necessary, the CAM-determined sorbent injection rates for applicable load ranges for this unit described in sub-Sections 6.a., b., and c., Specific Reporting Requirements:
 - i. The monthly average sulfur content of fuel burned at this unit calculated at the end of any calendar month is greater than 20% above the highest sulfur content used at this unit during the most recent stack test; or
 - ii. To the extent that the permittee reasonably expects any of the following changes to remain in effect for more than sixty (60) days:
 - a. The material replacement, or change in design, of SAM emissions control equipment at this unit.
 - b. a change in the type of fuel used at this unit to a fuel not permitted for use at this unit prior to August 21, 2013; or
 - c. A change in the type of sorbent material used for SAM emission control at this unit.
 - d. Any other change that the permittee would reasonably expect to result in an increase in the SAM emission rate prior to adjustment of control parameters.
 - iii. The permittee may rely on the results of a previously scheduled stack test in lieu of conducting an additional stack test if the previously scheduled stack test will occur during the sixty (60)-day period after implementation of the relevant change [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.c.].
- m. Following approval by KDAQ of a CAM plan revision submitted pursuant to sub-Section k., above, or sub-Sections 6.b. or c., Specific Reporting Requirements, at all times that this unit is in operation, the permittee shall monitor the continuous monitored indication of SAM and the sorbent injection rate for this unit for comparison to the applicable performance indicators determined in the CAM plan for the relevant load.
 - i. Any excursion from the applicable CAM-determined performance indicators shall be addressed through compliance with the response protocols set forth in the CAM plan. Such an excursion shall not be considered a violation subject to stipulated penalties under the Consent Decree, notwithstanding any language in Section IX (Stipulated Penalties) of Civil Action Number 3:12-cv-00076-GFVT.
 - ii. Any excursions from the CAM plan shall be subject to the applicable reporting requirements of Section VII of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.d.].

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

4. Specific Monitoring Requirements (Continued):

- n. The permittee shall maintain a daily log of the sorbent injection rates and other relevant operating data, including date, average daily unit load (MWg), operating hours for each day, sorbent injection flow rate (gallons per minute and tons per hour), and sorbent injection density (if injecting liquid sorbent) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.e.].
- o. The permittee shall determine the opacity of emissions from the stack by Method 9 in accordance with the schedule prescribed in 40 CFR 60.45(b)(7). Method 9 testing may also be requested more frequently by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005, recorded in a permanent form suitable for inspection [401 KAR 59:005, Section 3(4)].
- b. The permittee shall 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 59:005, Section 3(2)].
- c. The permittee shall record the type (cold, warm, or hot) of each start-up [401 KAR 52:020, Section 10].
- d. The permittee shall maintain records of:
 - i. Each fuel analysis;
 - ii. The rate of fuel burned for each fuel type, on a daily basis;
 - iii. The heating value, in Btu/lb, and ash content, in percent by weight, of fuel as-burned on a weekly basis;
 - iv. The average electrical output and the minimum and maximum hourly generation rate on a daily basis;
 - v. When no excess emissions have occurred and the continuous monitoring system(s) have not been inoperative, repaired, or adjusted;
 - vi. Data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard; and
 - vii. Results of all compliance tests [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

Imber

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

5. Specific Recordkeeping Requirements (Continued):

- e. For each Method 9 test, the permittee shall maintain records of the date and time intervals of each test; name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and copies of all visible emission observer opacity field data sheets [40 CFR 60.45(h)(1)].
- f. The permittee shall keep visible observation records and Method 9 observations in a designated logbook or electronic format. Records shall be maintained for five (5) years [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable recording provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- h. The permittee shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control that relate directly to the permittee's performance of its obligations under Civil Action Number 3:12-cv-00076-GFVT for the following periods: (a) until August 21, 2023 for records concerning physical or operational changes undertaken in accordance with Section VI (Sulfuric Acid Mist Reduction and Controls) of Civil Action Number 3:12-cv-00076-GFVT; and (b) until August 21, 2020 for all other records. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, the permittee shall provide copies of documents, records, or other information required to be maintained under this Paragraph [Civil Action Number 3:12-cv-00076-GFVT, paragraph 74] or under sub-Section 4.m., Specific Monitoring Requirements [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee has submitted an initial CAM plan under 40 C.F.R. Part 64, to satisfy the SAM emission rates in paragraph 21.a. of the consent decree, with a copy sent to EPA contemporaneously with the submittal to KDAQ [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.a.].
- b. Within sixty (60) days of completion of the second stack test required for this unit under sub-Section 3., Testing requirements, and each subsequent stack test for this unit, the permittee shall submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan that determines average continuous monitored indication of SAM values and minimum sorbent injection rates for applicable load ranges, as provided for in the CAM plan [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.ii.].
- c. Notwithstanding sub-Sections a. and b. above, if the permittee demonstrates that the CAM-determined minimum sorbent injection rates for SAM control have remained consistent for five (5) consecutive testing periods, then the permittee may submit to KDAQ for review and

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

6. Specific Reporting Requirements (Continued):

approval, with a contemporaneous copy to EPA, a revision to its CAM plan that provides for the permittee to thereafter use the previously determined minimum sorbent injection rates without recalculating based on subsequent testing periods [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.iii.].

- d. Excess emission and monitoring system performance (MSP) reports shall be submitted to the Administrator semiannually for each six (6)-month period in the calendar year. All semiannual reports shall be submitted electronically or postmarked by the thirtieth (30th) day following the end of each six (6)-month period. Periods of excess emissions and monitoring systems downtime that shall be reported are defined as follows:
 - i. For particulate matter measurements, the report summary shall consist of the magnitude in actual pounds per million Btu (lb/MMBtu), of any rolling three (3)-hour average of particulate matter greater than the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous particulate matter measurements per hour. Any time period exempted shall be considered before determining the excess average of particulate matter.
 - ii. Excess emissions are defined as any six (6)-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one (1) six (6)-minute average of up to 27 percent opacity need not be reported [40 CFR 60.45(g)(1)].
 - iii. Excess emissions for SO₂ are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) of SO₂ as measured by a CEMS exceed the applicable standard in sub-Section 2.c., **Emission Limitations** [40 CFR 60.45(g)(2)].
 - iv. Excess emissions for NO_x are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) exceed the applicable standards in sub-Section 2.d., **Emission Limitations** [40 CFR 60.45(g)(3)].
- e. Each excess emission and MSP report shall include the following information:
 - i. The magnitude of the excess emission computed in accordance with 40 CFR 60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
 - ii. All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.
 - iii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

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

6. Specific Reporting Requirements (Continued):

- iv. 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.
- v. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted.

[40 CFR 60.7(c), referenced by 40 CFR 60.45(g)].

- f. For exceedances that occur as a result of start-up, the permittee shall report the type of start-up (cold, warm, or hot); and whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of how the start-up exceeded recommended or typical durations [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable reporting provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015. However, the Division has granted a compliance extension request for this emission unit until March 11, 2016 [Approval letter, February 5, 2015].
- h. Beginning sixty (60) days after the end of the second calendar quarter following August 21, 2013, and continuing on a semi-annual basis until termination of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to EPA a periodic progress report containing the following:
 - i. Information, including milestone dates, regarding the design and installation of the SAM control technologies required under Civil Action Number 3:12-cv-00076-GFVT, including any problems encountered or anticipated, together with implemented or proposed solutions;
 - ii. Any information indicating that the installation or commencement of operation of a SAM control device might be delayed, including the nature and cause of the delay, and any steps taken by the permittee to mitigate such delay;
 - iii. Beginning with the first report filed after June 30, 2013, information to demonstrate compliance with the relevant SAM emission rate during the preceding six (6)-month reporting period, including any compliance testing reports for SAM;
 - iv. Information regarding any events or changes identified in paragraph 23.c.(i)-(ii) of Civil Action Number 3:12-cv-00076-GFVT;
 - v. Information regarding the status of any permit applications submitted or any permit applications required to be submitted under the Consent Decree, including the development of a CAM plan.

[Civil Action Number 3:12-cv-00076-GFVT, paragraph 24].

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

6. Specific Reporting Requirements (Continued):

- i. In any periodic report submitted pursuant to Section VII. of Civil Action Number 3:12-cv-00076-GFVT, the permittee may incorporate by reference information previously submitted under its Title V permitting requirements, provided that the permittee attaches the Title V Permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V Permit report that are responsive to the information required in the periodic report [Civil Action Number 3:12-cv-00076-GFVT, paragraph 25].
- j. Deviation Reports. In addition to the report required by paragraph h. above, if the permittee violates or deviates from any provision of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to the United States a report on the violation or deviation within ten (10) business days after the permittee knew or should have known of the event. In the report, the permittee shall explain the cause or causes of the violation or deviation and any measures taken or to be taken by the permittee to cure the reported violation or deviation or to prevent such violation or deviations in the future. If at any time the provisions of Civil Action Number 3:12-cv-00076-GFVT are included in the Title V permit, consistent with the requirements for such inclusion in Civil Action Number 3:12-cv-00076-GFVT, then the deviation reports required under the applicable Title V regulations shall be deemed to satisfy all the requirements of this sub-Section, provided that such reports are also submitted to the United States [Civil Action Number 3:12-cv-00076-GFVT, paragraph 26].
- k. All reports required by Civil Action Number 3:12-cv-00076-GFVT shall be submitted to the persons designated in Section XVII (Notices) of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 27].

7. Specific Control Equipment Operating Conditions:

- a. The electrostatic precipitator/pulse jet fabric filter, low nitrogen oxides burners, selective catalytic reduction unit, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the electrostatic precipitator/pulse jet fabric filter, low nitrogen oxide burners, selective catalytic reduction unit, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be maintained [40 CFR 63.10032 and 401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

Emission Unit 04: Indirect Heat Exchanger

Description:

Pulverized coal-fired unit, dry bottom, wall-fired boiler

Construction commenced: prior to September 18, 1978

Number two fuel oil used for startups and stabilization

Maximum continuous rating: 5,500 MMBtu/hour

Control Equipment:

Electrostatic Precipitator

Low Nitrogen Oxides Burners with Overfire Air

Selective Catalytic Reduction (SCR)

Wet Limestone Forced-Oxidation Sulfur Dioxide Scrubber (WFGD) GH4

Dry Sorbent Injection SAM Control

Dry Sorbent Injection Hg Control and Pulse-Jet Fabric Filter (to begin construction in 2012)

Stack: EO26 (not shared)

APPLICABLE REGULATIONS

401 KAR 51:160, NO_x Requirements for Large Utility and Industrial Boilers

401 KAR 52:060, Acid rain permits (See Section J)

401 KAR 59:005, General requirements

40 CFR 60, Subpart D, Standards of performance for fossil-fuel-fired steam generators

40 CFR 63, Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal and Oil-fired Electric Utility Steam Generating Units

40 CFR Part 64, Compliance Assurance Monitoring (for PM, SO₂, and NO_x)

40 CFR Part 75, Continuous Emission Monitoring

40 CFR 97, Subpart AAAAA, TR NO_x Annual Trading Program (See Section L)

40 CFR 97, Subpart BBBB, TR NO_x Ozone Season Trading Program(See Section L)

40 CFR 97, Subpart CCCC TR SO₂ Group 1 Trading Program (See Section L)

APPLICABLE CONSENT DECREES:

Civil Action Number 3:12-cv-00076-GFVT, filed August 21, 2013

1. Operating Limitations:

- a. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015.

Permit Number: V-12-028 R1

Imber

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**1. Operating Limitations (Continued):**

- b. Beginning no later than December 20, 2012, the permittee will continuously operate the existing SAM controls at Ghent Station Units 1, 2, 3 and 4 [Civil Action Number 3:12-cv-00076-GFVT, paragraph 19]. By no later than December 31, 2012, the permittee will install and continuously operate enhanced sorbent injection controls to reduce SAM emissions with the goal of achieving a SAM emission rate of no greater than 5 ppmvd (at 3% O₂) for this unit [Civil Action Number 3:12-cv-00076-GFVT, paragraph 20.a.].

Compliance Demonstration Method:

The permittee shall demonstrate compliance according to sub-Section 4.n., **Specific Monitoring Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed 0.10 lb/MMBtu based on a three (3)-hour average [40 CFR 60.42(a)(1)].

Compliance Demonstration Method:

Compliance with the particulate matter emission limit shall be demonstrated by performance testing as required in sub-Section 3.a., **Testing Requirements.**

- b. Emissions shall not exceed 20 percent opacity based on a six (6)-minute average except that a maximum of 27 percent opacity shall be permissible for not more than one (1) six (6)-minute period in any sixty (60) consecutive minutes [40 CFR 60.42(a)(2)].

Compliance Demonstration Method:

Compliance with the opacity standard shall be demonstrated by Method 9 testing as required in sub-Section 4.o., **Specific Monitoring Requirements.**

- c. Sulfur dioxide emissions shall not exceed 1.2 lbs/MMBtu based on a three (3)-hour average [40 CFR 60.43(a)(2)].

Compliance Demonstration Method:

Compliance with SO₂ emission limits shall be demonstrated by SO₂ CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

- d. Nitrogen oxides emissions expressed as nitrogen dioxide shall not exceed 0.70 lb/MMBtu based on a three (3)-hour average [40 CFR 60.44(a)(3)].

Compliance Demonstration Method:

Compliance with NO_x emission limits shall be demonstrated by NO_x CEMS as required in sub-Section 4.a., **Specific Monitoring Requirements.**

- e. Between August 31, 2012 and June 30, 2014, emissions of SAM shall not exceed 10 ppmvd (at 3% O₂). After June 30, 2014, emissions of SAM shall not exceed 5 ppmvd (at 3% O₂) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 20.b.iii. and 20.c.iii.].

Permit Number: V-12-028 R1

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

2. Emission Limitations (Continued):

Compliance Demonstration Method:

Compliance with the SAM emission rate shall be demonstrated through the use of stack tests described in sub-Sections 3., **Testing Requirements**.

- f. The permittee shall comply with all applicable provisions of 40 CFR 63.9991, no later than April 16, 2015.

General MATS Compliance Demonstration Method:

- i. The permittee shall comply with 40 CFR 63, Subpart UUUUU, no later than April 16, 2015 [40 CFR 63.9984(b)].
- ii. The permittee shall meet the notification requirements in 40 CFR 63.10030 according to the schedule in 40 CFR 63.10030 and in 40 CFR 63, Subpart A. Some of the notifications must be submitted before compliance with the emission limits and work practice standards in 40 CFR 63, Subpart UUUUU is required [40 CFR 63.9984(c)].
- iii. The permittee shall demonstrate that compliance has been achieved, by conducting the required performance tests and other activities, no later than one-hundred-eighty (180) days after the applicable date in sub-Section (b) or (c) of 40 CFR 63.9984 [40 CFR 63.9984(f)].
- iv. The permittee shall demonstrate continuous compliance according to 40 CFR 63.10000 through 40 CFR 63.10023, no later than April 16, 2015.

3. Testing Requirements:

- a. If no additional stack tests are performed pursuant to sub-Section 4.f., **Specific Monitoring Requirements**, the permittee shall conduct a performance test for particulate matter emissions by the start of the fourth (4th) year of the term of this permit to demonstrate compliance with the applicable standard within the life of the permit. This requirement may be satisfied with the successful completion of particulate matter testing performed in conjunction with PM CEMS compliance certification/recertification when approved by the Division [401 KAR 50:045, Section 1].
- b. Testing shall be conducted in accordance with 40 CFR 60.46, 401 KAR 50:045, and 40 CFR 64.4(c)(1). Testing shall be conducted under conditions representative of maximum emissions potential under anticipated operating conditions at the pollutant-specific emissions unit [401 KAR 50:045, Section 5].
- c. The permittee shall comply with all applicable provisions of 40 CFR 63.10005 through 40 CFR 63.10009 and 40 CFR 63.10011, no later than April 16, 2015.
- d. Compliance with each SAM emission rate set forth in sub-Section 2.e., **Emission Limitations**, shall be determined through stack tests conducted pursuant to the most recent procedures set forth in Appendix A of Civil Action Number 3:12-cv-00076-GFVT. Such stack tests shall be conducted under representative unit operating conditions, taking into account fuel sulfur content, load, and other parameters known to impact SAM emissions

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

3. Testing Requirements (Continued):

[Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.a.].

- e. The permittee shall conduct a bi-annual stack test at each unit for the two (2) years following August 21, 2013. If, after the initial two (2)-year period of bi-annual stack tests, the permittee is able to demonstrate during any subsequent stack test that the SAM emission rate for this unit is less than 80% of the permanent SAM Emission rate for this unit, then the permittee may reduce the frequency of the stack tests required for this unit under the Consent Decree to an annual basis until termination of the Consent Decree [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.b.].
- f. The permittee may petition EPA to change the annual stack test and reporting requirements if it can demonstrate that appropriate continuous emissions devices for SAM are available, but the permittee shall submit SAM emissions control parameters and data on at least an annual basis [Civil Action Number 3:12-cv-00076-GFVT, paragraph 22.c.].

4. Specific Monitoring Requirements:

- a. CEMS shall be installed, calibrated, maintained, and operated for measuring sulfur dioxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions [40 CFR 60.45(a)]. The permittee shall ensure the CEMS are in compliance with, and the permittee shall comply with, the requirements of 40 CFR 60, Appendix B [401 KAR 59:005, Section 4(1)] and 40 CFR 75 [401 KAR 52:020, Section 10].
- b. CEMS shall be used to satisfy the CAM requirements for sulfur dioxide and nitrogen oxides. When CEMS data shows excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and CEMS and take corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- c. Methods 6, 7, and 3B of 40 CFR 60, Appendix A, as applicable, shall be used for the performance evaluations of SO₂ and NO_x CEMS. Acceptable alternative methods for Methods 6, 7, and 3B of Appendix A are given in 40 CFR 60.46(d) [40 CFR 60.45(c)(1)].
- d. Sulfur dioxide or nitric oxide, as applicable, shall be used for preparing calibration gas mixtures under Performance Specification 2 of 40 CFR 60, Appendix B [40 CFR 60.45(c)(2)].
- e. The span values for the CEMS measuring sulfur dioxide and nitrogen oxides emissions shall be in accordance with 40 CFR 60.45(c)(3) and (4).
- f. CEMS shall be installed, calibrated, maintained, and operated for measuring particulate matter emissions. The PM-CEMS shall comply with Appendix B to 40 CFR 60 [401 KAR 59:005, Section 4(1)]. The permittee must follow the most current applicable compliance and monitoring provisions in 40 CFR 60.48Da and 40 CFR 60.49Da, which includes 40 CFR 60, Appendix F, Procedure 2 [40 CFR 60.45(g)(4)].

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

4. Specific Monitoring Requirements (Continued):

- g. CEMS shall be used to satisfy the CAM requirements for PM. When CEMS data show excess emissions as defined in sub-Section 6.d., **Specific Reporting Requirements**, the permittee shall, as appropriate, initiate an investigation of the cause of the excess emissions and CEMS and take any corrective action as soon as practicable [40 CFR 64.3(d)(1)].
- h. Continuous emission monitoring data shall be converted into the units of applicable standards using the conversion procedure described in 40 CFR 60.45(e).
- i. The permittee shall monitor the duration of each start-up [401 KAR 52:020, Section 10].
- j. The permittee shall comply with all applicable continuous monitoring requirements of 40 CFR 63.10010, 40 CFR 63.10020 and 40 CFR 63.10021, no later than April 16, 2015.
- k. The permittee shall implement CAM for SAM at EU 04 based on the most recent CAM plant approved by the Division and as follows:

TABLE 1 – PRIMARY - SAM COMPLIANCE INDICATOR

Indicator	SAM indicative monitor output is the primary compliance indicator.
Applicability	The correlated output of the SAM indicative monitoring system at each location will be compared to applicable SAM emission rates.
Monitoring Frequency, Data Collection, and Averaging Period	The continuous SAM indicative monitor output will be recorded as hourly averages and the data captured will be reduced to 3-hour rolling averages by a performance indicator data collection (PI) system.
Compliance Indication	Using the results of compliance demonstration stack tests performed pursuant to sub-Section 3., <u>Testing Requirements</u> , the consent decree and average SAM indicative monitor output values collected during those tests, a correlation will be developed using regression analysis. Following development of the correlation, the SAM indicative monitor's output will be adjusted according to that correlation. The correlation adjusted SAM indicative monitor's output data will be reduced to 3-hour rolling averages and compared with the applicable SAM emission rate in sub-section 2.e, <u>Emission Limitations</u> . An excursion of SAM indicative monitor data is defined as occurring when the 3-hour rolling average of correlated SAM indicative monitor output values exceeds 90% of the applicable SAM emission rate.
QA/QC Practices and Criteria	B. The permittee shall continue to calibrate and maintain the SAM indicative monitoring system in accordance with good engineering practices.
Recordkeeping	Hourly SAM indicative monitor output and 3-hour rolling averages of the SAM indicative monitor output will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	In response to an excursion, the permittee shall: A. Complete an inspection of the SAM indicative monitor system to determine any potential problems with data collection or validation

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

4. Specific Monitoring Requirements (Continued):

Corrective Actions (Continued)	and correct any revealed performance issues in an expedient manner and B. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner. C. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

TABLE 2 – ALTERNATE SAM COMPLIANCE INDICATOR

Indicator	DSI injection rates are the secondary compliance indicator.
Applicability	DSI data will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data. The DSI injection rates will be determined from data collected during compliance demonstration stack testing.
Monitoring Frequency, Data Collection, and Averaging Period Monitoring Methods	DSI rate will be used when valid SAM indicative monitor data is unavailable. DSI rate (lb/hr) will be monitored continuously, an average will be recorded hourly, and the data captured will be reduced to 3-hour rolling averages.
Compliance Indication	Minimum DSI rates will be determined using operational data gathered during compliance demonstration stack testing performed pursuant to sub-Section 3., Testing Requirements . If, based on performance tests, the current acceptable DSI indicator ranges need to be amended, the permittee shall submit the new ranges to the Division's Florence Regional Office for approval pursuant to consent decree requirements. An excursion of this section of the CAM plan will only be applicable during periods when the SAM indicative monitor is not capable of collecting accurate data (i.e., malfunction or undergoing maintenance). An excursion of this section of the CAM plan will be defined if the three-hour rolling average of the DSI rates are below the minimum injection levels determined from the appropriate correlations. Current appropriate DSI indicator ranges are in the table below.
QA/QC Practices and Criteria	A. The permittee shall follow the installation, operation, and maintenance procedures of the DSI system in accordance with good engineering. B. The permittee shall continue to calibrate and maintain the DSI system in accordance with good engineering practices.
Recordkeeping	Hourly DSI rate and 3-hour rolling averages of the DSI rate will be recorded. Associated upset conditions and monitoring malfunctions will be recorded as applicable.
Corrective Actions	In response to an excursion measured by the DSI method, the permittee shall:

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

4. Specific Monitoring Requirements (Continued):

Corrective Actions (Continued)	<p>A. Complete an inspection of the DSI system as necessary to determine the cause of any injection problems and correct any revealed performance issues in an expedient manner.</p> <p>B. If corrective actions are not successful in returning the performance indicators to compliant ranges, the permittee shall perform an additional stack test to confirm or update the SAM indicative monitor correlation and DSI per MWg relationships.</p>
Reporting	A summary of excursions and corrective actions will be included in the semi-annual Consent Decree report and in the Title V report.

1. If any of the events listed below occur at this unit, the permittee shall conduct a stack test consistent with sub-Section 3., **Testing Requirements**, within sixty (60) days of the relevant change at this unit and use the results of the stack test to adjust, as necessary, the CAM-determined sorbent injection rates for applicable load ranges for this unit described in paragraphs 6.a., b., and c., **Specific Reporting Requirements**:
 - i. The monthly average sulfur content of fuel burned at this unit calculated at the end of any calendar month is greater than 20% above the highest sulfur content used at this unit during the most recent stack test; or
 - ii. To the extent that the permittee reasonably expects any of the following changes to remain in effect for more than sixty (60) days:
 - a. The material replacement, or change in design, of SAM emissions control equipment at this unit.
 - b. A change in the type of fuel used at this unit to a fuel not permitted for use at this unit prior to August 21, 2013; or
 - c. A change in the type of sorbent material used for SAM emission control at this unit.
 - d. Any other change that the permittee would reasonably expect to result in an increase in the SAM emission rate prior to adjustment of control parameters.
 - iii. The permittee may rely on the results of a previously scheduled stack test in lieu of conducting an additional stack test if the previously scheduled stack test will occur during the sixty (60)-day period after implementation of the relevant change [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.c.].
 - m. Following approval by KDAQ of a CAM plan revision submitted pursuant to sub-Section k., above, or sub-Sections 6.b. or c., **Specific Reporting Requirements**, at all times that this unit is in operation, the permittee shall monitor the continuous monitored indication of SAM and the sorbent injection rate for this unit for comparison to the applicable performance indicators determined in the CAM plan for the relevant load.

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

4. Specific Monitoring Requirements (Continued):

- i. Any excursion from the applicable CAM-determined performance indicators shall be addressed through compliance with the response protocols set forth in the CAM plan. Such an excursion shall not be considered a violation subject to stipulated penalties under this Consent Decree, notwithstanding any language in Section IX (Stipulated Penalties) of Civil Action Number 3:12-cv-00076-GFVT.
- ii. Any excursions from the CAM plan shall be subject to the applicable reporting requirements of Section VII of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.d.].
- n. The permittee shall maintain a daily log of the sorbent injection rates and other relevant operating data, including date, average daily unit load (MWg), operating hours for each day, sorbent injection flow rate (gallons per minute and tons per hour), and sorbent injection density (if injecting liquid sorbent) [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.e.].
- o. The permittee shall determine the opacity of emissions from the stack by Method 9 in accordance with the schedule prescribed in 40 CFR 60.45(b)(7). Method 9 testing may also be requested more frequently by the cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems and devices; and all other information required by 401 KAR 59:005, recorded in a permanent form suitable for inspection [401 KAR 59:005, Section 3(4)].
- b. The permittee shall 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 59:005, Section 3(2)].
- c. The permittee shall record the type (cold, warm, or hot) of each start-up [401 KAR 52:020, Section 10].
- d. The permittee shall maintain records of:
 - i. Each fuel analysis;
 - ii. The rate of fuel burned for each fuel type, on a daily basis;
 - iii. The heating value, in Btu/lb, and ash content, in percent by weight, of fuel as-burned on a weekly basis;

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

5. Specific Recordkeeping Requirements (Continued):

- iv. The average electrical output and the minimum and maximum hourly generation rate on a daily basis;
 - v. When no excess emissions have occurred and the continuous monitoring systems(s) have not been inoperative, repaired, or adjusted;
 - vi. Data collected either by the continuous monitoring systems or as necessary to convert monitoring data to the units of the applicable standard; and
 - vii. Results of all compliance tests [401 KAR 52:020, Section 10].
- e. For each Method 9 test, the permittee shall maintain records of the date and time intervals of each test; name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and copies of all visible emission observer opacity field data sheets [40 CFR 60.45(h)(1)].
- f. The permittee shall keep visible observation records and Method 9 observations in a designated logbook or electronic format. Records shall be maintained for five (5) years [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable recording provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015.
- h. The permittee shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control that relate directly to the permittee's performance of its obligations under Civil Action Number 3:12-cv-00076-GFVT for the following periods: (a) until August 21, 2023 for records concerning physical or operational changes undertaken in accordance with Section VI (Sulfuric Acid Mist Reduction and Controls) of Civil Action Number 3:12-cv-00076-GFVT; and (b) until August 21, 2020 for all other records. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information retention period, upon request by the United States, the permittee shall provide copies of documents, records, or other information required to be maintained under this Paragraph [Civil Action Number 3:12-cv-00076-GFVT, paragraph 74] or under sub-Section 4.m., **Specific Monitoring Requirements** [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee has submitted an initial CAM plan under 40 C.F.R. Part 64, to satisfy the SAM emission rates in paragraph 21.a. of the consent decree, with a copy sent to EPA contemporaneously with the submittal to KDAQ [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.a.].

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

6. Specific Reporting Requirements (Continued):

- b. Within sixty (60) days of completion of each stack test required for this unit under sub-Section 3.e., Testing Requirements, the permittee shall submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan, that determines average continuous monitored indication of SAM values and minimum sorbent injection rates for applicable load ranges, as provided for in the CAM plan [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.i.].
- c. Notwithstanding sub-Sections a. and b. above, if the permittee demonstrates that the CAM-determined minimum sorbent injection rates for SAM control have remained consistent for five (5) consecutive testing periods, then the permittee may submit to KDAQ for review and approval, with a contemporaneous copy to EPA, a revision to its CAM plan that provides for the permittee to thereafter use the previously determined minimum sorbent injection rates without recalculating based on subsequent testing periods [Civil Action Number 3:12-cv-00076-GFVT, paragraph 23.b.iii.].
- d. Excess emission and monitoring system performance (MSP) reports shall be submitted to the Administrator semiannually for each six (6)-month period in the calendar year. All semiannual reports shall be submitted electronically or postmarked by the thirtieth (30th) day following the end of each six (6)-month period. Periods of excess emissions and monitoring systems downtime that shall be reported are defined as follows:
 - i. For particulate matter measurements, the report summary shall consist of the magnitude in actual pounds per million Btu (lb/MMBtu) of any rolling three (3)-hour average of particulate matter greater than the applicable standard for each hour of operation of the facility. Average values may be obtained by integration over the averaging period or by arithmetically averaging a minimum of four (4) equally spaced, instantaneous particulate matter measurements per hour. Any time period exempted shall be considered before determining the excess average of particulate matter.
 - ii. Excess emissions are defined as any six (6)-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one (1) six (6)-minute average of up to 27 percent opacity need not be reported [40 CFR 60.45(g)(1)].
 - iii. Excess emissions for SO₂ are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) of SO₂ as measured by a CEMS exceed the applicable standard in sub-Section 2.c., Emission Limitations [40 CFR 60.45(g)(2)].
 - iv. Excess emissions for NO_x are defined as any three (3)-hour period during which the average emissions (arithmetic average of three (3) contiguous one (1)-hour periods) exceed the applicable standards in sub-Section 2.d., Emission Limitations [40 CFR 60.45(g)(3)].
- e. Each excess emission and MSP report shall include the following information:

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

6. Specific Reporting Requirements (Continued):

- i. The magnitude of the excess emission computed in accordance with 40 CFR 60.13(h), any conversion factors used, the date and time of commencement and completion of each time period of excess emissions, and the process operating time during the reporting period.
- ii. All hourly averages shall be reported for sulfur dioxide and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.
- iii. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
- iv. 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.
- v. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted.
[40 CFR 60.7(c), referenced by 40 CFR 60.45(g)].
- f. For exceedances that occur as a result of start-up, the permittee shall report the type of start-up (cold, warm, or hot); and whether or not the duration of the start-up exceeded the manufacturer's recommendation or typical, historical durations, and if so, an explanation of how the start-up exceeded recommended or typical durations [401 KAR 52:020, Section 10].
- g. The permittee shall comply with all applicable reporting provisions of 40 CFR 63.10030 through 40 CFR 63.10033, no later than April 16, 2015.
- h. Beginning sixty (60) days after the end of the second calendar quarter following August 21, 2013, and continuing on a semi-annual basis until termination of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to EPA a periodic progress report containing the following:
 - i. Information, including milestone dates, regarding the design and installation of the SAM control technologies required under Civil Action Number 3:12-cv-00076-GFVT, including any problems encountered or anticipated, together with implemented or proposed solutions;
 - ii. Any information indicating that the installation of commencement or operation of a SAM control device might be delayed, including the nature and cause of the delay, and any steps taken by the permittee to mitigate such delay;
 - iii. Beginning with the first report filed after June 30, 2013, information to demonstrate compliance with the relevant SAM emission rate during the preceding six (6)-month reporting period, including any compliance testing reports for SAM;

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

6. Specific Reporting Requirements (Continued):

iv. Information regarding any events or changes identified in Paragraph 23.c(i)-(ii) of Civil Action Number 3:12-cv-00076-GFVT;

v. Information regarding the status of any permit applications submitted or any permit applications required to be submitted under the Consent Decree, including the development of a CAM plan.

[Civil Action Number 3:12-cv-00076-GFVT, paragraph 24].

i. In any periodic report submitted pursuant to Section VII. of Civil Action Number 3:12-cv-00076-GFVT, the permittee may incorporate by reference information previously submitted under its Title V permitting requirements, provided that the permittee attaches the Title V permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the periodic report [Civil Action Number 3:12-cv-00076-GFVT, paragraph 25].

j. Deviation Reports. In addition to the report required by paragraph h. above, if the permittee violates or deviates from any provision of Civil Action Number 3:12-cv-00076-GFVT, the permittee shall submit to the United States a report on the violation or deviation within ten (10) business days after the permittee knew or should have known of the event. In the report, the permittee shall explain the cause or causes of the violation or deviation and any measures taken or to be taken by the permittee to cure the reported violation or deviation or to prevent such violation or deviations in the future. If at any time the provisions of Civil Action Number 3:12-cv-00076-GFVT are included in the Title V permit, consistent with the requirements for such inclusion in Civil Action Number 3:12-cv-00076-GFVT, then the deviation reports required under the applicable Title V regulations shall be deemed to satisfy all the requirements of this sub-Section, provided that such reports are also submitted to the United States [Civil Action Number 3:12-cv-00076-GFVT, paragraph 26].

k. All reports required by Civil Action Number 3:12-cv-00076-GFVT shall be submitted to the persons designated in Section XVII (Notices) of Civil Action Number 3:12-cv-00076-GFVT [Civil Action Number 3:12-cv-00076-GFVT, paragraph 27].

7. Specific Control Equipment Operating Conditions:

a. The electrostatic precipitator/pulse jet fabric filter, low nitrogen oxides burners, selective catalytic reduction unit, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].

b. Records regarding the maintenance of the electrostatic precipitator/pulse jet fabric filter, low nitrogen oxide burners, selective catalytic reduction unit, wet limestone flue gas desulfurization unit, and dry sorbent injection unit shall be maintained [40 CFR 63.10032 and 401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Emission Unit: 05 **Coal Receiving Operations**
Emission Unit: 07 **Coal Handling Operations**
Emission Unit: 08 **Coal Conveying and Handling Operations**
Emission Unit: 25 **Limestone Handling and Receiving**
Emission Unit: 27 **Limestone Stockpile Operations West**

Description:

EU 05 Equipment includes: Barge Unloader and Unloading Operations (Coal use)
 Construction commenced: prior to November 15, 1973
 Maximum Operating Rate: 3,600 tons/hour
 Controls: Enclosures (Barge unloader itself is not enclosed)

EU 08 Equipment includes: Conveyors 1A, 1B, 1C, and transfer points
 (From Barge Unloader thru Transfer House 1 to Sample House)
 Construction commenced: before October 24, 1974
 Maximum Operating Rate: 3,600 tons/hour, each
 Controls: Enclosures

EU 07 Equipment includes: Coal Belt Conveyors and Coal Stockpiles and Operations Listed
 Below
 (From Sample House to Coal Stockpiles, or Sample House thru Transfer House 4 thru Crusher 1
 House to Generating Units)
 Construction commenced: before October 24, 1974

<u>Operation</u>	<u>Maximum Operating Rate (Tons/hour)</u>
Conveyors 1D, 1E, 1F and Transfer Points	3,600 each
Conveyor 1J, and Transfer Points	900 each
Conveyor 1G, and Transfer Points	1,500 each
Conveyors 1H, and Transfer Points	1,800 each
Coal Stockpile and Operations	3,600
Controls:	Enclosures, Fabric Filters, or Wet Suppression

EU 25 Equipment includes: Barge Unloader and Unloading Operations (New Lime use)
 Construction commenced: 2008
 Maximum Operating Rate (Receiving): 1,000 Tons/hour
 Controls: Enclosures (Barge unloader itself is not enclosed)

EU 27 Equipment includes: (LSP1)Limestone Storage Pile
 Construction commenced: 2008
 Maximum Operating Rate: 1,000 Tons/hour
 Controls: Wet Suppression

Permit Number: V-12-028 R1

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

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions

1. Operating Limitations:

NA

2. Emission Limitations:

- a. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not be limited to the following:
 - i. Application and maintenance of asphalt, application of water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dusts;
 - ii. 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.
 - iii. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne.
 - iv. The maintenance of paved roadways in a clean condition [401 KAR 63:010, Section 3].
- b. Discharge of visible fugitive dust emissions beyond the property line is prohibited [401 KAR 63:010, Section 3].
- c. Open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered at all times when in motion [401 KAR 63:010, Section 4(1)].
- d. The permittee shall not 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(4)].

3. Testing Requirements:

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 coal received, and limestone received, in tonnages, monthly [401 KAR 52:020, Section 10].
- b. Visual observations shall be made on a daily basis each day of operation, of all operations and control equipment to ensure the control equipment is functioning while the associated equipment is in operation and to determine if any fugitive air emissions are being generated in such a manner as to cause a nuisance or to cross the property line. If such a condition develops, water or another wetting agent shall be applied to suppress the fugitive air

Permit Number: V-12-028 R1

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

4. Specific Monitoring Requirements (Continued):

emissions so as to comply with the applicable requirements of 401 KAR 63:010 as listed above.

- c. In addition, visual observations shall be made on a daily basis each day of operation to determine if fugitive dust is becoming airborne from storage piles and associated operations as a result of vehicular traffic or windy conditions. If such a condition develops, water or a chemical wetting agent shall be applied to these areas as specified in 401 KAR 63:010 as listed above.
- d. See Section F, **Monitoring, Recordkeeping, and Reporting Requirements**, Conditions 1, 2, and 3.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the coal received, and limestone received, in tonnages, monthly [401 KAR 52:020, Section 10].
- b. Records of daily observations and support information as required in sub-Section 4.b., **Specific Monitoring Requirements**, shall be kept in accordance with the provisions of Section F, **Monitoring, Recordkeeping, and Reporting Requirements**, Condition 2 [401 KAR 52:020, Section 10].
- c. A log shall be kept of all routine and non-routine maintenance performed on each control device [401 KAR 52:020, Section 10].
- d. See Section F, **Monitoring, Recordkeeping, and Reporting Requirements**, Conditions 1 and 2.

6. Specific Reporting Requirements:

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

7. Specific Control Equipment Operating Conditions:

- a. The air pollution control equipment (including but not limited to enclosures) shall be used to maintain compliance with applicable requirements, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the air pollution control equipment (including but not limited to enclosures) shall be maintained [401 KAR 52:020, Section 10].
- c. See Section E – **Control Equipment Conditions** for further requirements.

Permit Number: V-12-028 R1

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

Emission Unit 06: Coal crushing operations (Crusher House #1)

Description:

Construction commenced: before October 24, 1974
 Equipment includes: four crushers and two surge bins
 Maximum Operating Rate: 1,800 tons/hour

Control Equipment:

Enclosure and Baghouse

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations

1. Operating Limitations:

NA

2. Emission Limitations:

- a. Particulate matter emissions into the open air shall not exceed $[55 (P)^{0.11} - 40]$ pounds per hour based on a three (3)-hour average where P is the Process Weight Rate as defined in 401 KAR 61:020 Section 2(4), in tons per hour [401 KAR 61:020, Section 3(2)].
- b. Any continuous emission(s) into the open air shall not equal or exceed 40 percent opacity based on a six (6)-minute average [401 KAR 61:020, Section 3(1)(a)].

Compliance Demonstration Method:

Compliance with the PM and opacity emission limits shall be demonstrated by qualitative visual observations as required in sub-Section 4.b., Specific Monitoring Requirements.

3. Testing Requirements:

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 monitor the operating rates and hours of operation on a daily basis [401 KAR 52:020, Section 10].
- b. The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis when the unit is in operation and maintain a log of the observations. If visible emissions from any stack are seen, then an inspection shall be initiated and corrective action taken. If visible emissions from a stack are seen (not including condensed water vapor in the plume), then an inspection shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

4. Specific Monitoring Requirements (Continued):

- c. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 1, 2, and 3.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain a log of qualitative visual observations of opacity and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard [401 KAR 52:020, Section 10].
- b. The permittee shall maintain records of the coal processed (tonnages) and hours of operation on a daily basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee shall report any visible emissions, the date and time of visible emissions, date and time of the excursions, and opacity value of all Method 9 tests taken semiannually [401 KAR 52:020, Section 10].
- b. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 5, 6, 7, and 8.

7. Specific Control Equipment Operating Conditions:

- a. The enclosures and baghouse shall be used and operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance and operation of the enclosures and baghouse shall be maintained [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

Emission Unit 09: Coal Conveyor 2H
Emission Unit 10: Coal Conveyor 6H
Emission Unit 11: Coal Crushing

Description:

Construction commenced before 1981 (operational in 1981), except for conveyors 2H (EU 09) and 2J (part of EU 11), for which construction commenced before 1977 (operational in 1977)

EU 09 Equipment includes: Conveyor 2H and transfer points
 Maximum Operating Rate: 1,800 tons/hour

EU 10 Equipment includes: Conveyor 6H and transfer points
 Maximum Operating Rate: 1,800 tons/hour

EU 11 Equipment includes: (below)

<u>Operation</u>	<u>Maximum Operating Rate (Tons/hour)</u>
Crusher House #2 (four crushers with one surge bin)	1,800
Conveyors 2J, 3J, 4J, 3M, 4M and Transfer Points	900 each
Conveyors 2G, and Transfer Points	1,500 each
Conveyors 5G, 6G, 7G, 8G, 3H, 4H, 5H, Coal Silo, and Transfer Points	1,800 each
Conveyors 3G, 4G and Transfer Points	2,400 each

Control Equipment: Enclosures and Fabric Filter

APPLICABLE REGULATIONS:

401 KAR 60:005, which incorporates by reference **40 CFR 60, Subpart Y, Standards of performance for coal preparation plants, for emission units commenced after October 24, 1974**

1. Operating Limitations:

NA

2. Emission Limitations:

Opacity from each of these emission units shall not exceed 20 percent [40 CFR 60.254(a)].

Compliance Demonstration Method:

Compliance with the opacity emission limit shall be demonstrated by qualitative visual observation and Method 9 testing as required in sub-Section 4.b., **Specific Monitoring Requirements.**

3. Testing Requirements:

EPA Reference Method 9 shall be used to determine opacity. Method 9 tests shall be performed pursuant to sub-Section 4.b., **Specific Monitoring Requirements**, and as required by the Division [40 CFR 60.254].

Permit Number: V-12-028 R1

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

4. Specific Monitoring Requirements:

- a. The permittee shall monitor the amount of coal received, in tonnages, monthly [401 KAR 52:020, Section 10].
- b. The permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If visible emissions from the stack are seen, then an inspection shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate [401 KAR 52:020, Section 10].
- c. See Section F, **Monitoring, Recordkeeping, and Reporting Requirements**, Conditions 1, 2, and 3.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the amount of coal processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].
- b. The permittee shall maintain records of the weekly log of qualitative visual observations of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee shall report the number of excursions above the opacity standard, date and time of the excursions and opacity value of the excursion semiannually [401 KAR 52:020, Section 10].
- b. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 5, 6, 7, and 8.

7. Specific Control Equipment Operating Conditions:

- a. The air pollution control equipment (including but not limited to enclosures and fabric filters) shall be used to maintain compliance with applicable requirements, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the air pollution control equipment (including but not limited to enclosures) shall be maintained [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1**SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)****Emission Unit 22: Four Cooling Towers****Description:**

Construction commenced: prior to 1992

Tower Number Maximum Operating Rate (Gallons per Minute)

1	191,000
2	197,000
3	172,000
4	172,000

APPLICABLE REGULATIONS:**401 KAR 63:010**, Fugitive emissions**1. Operating Limitations:**

NA

2. Emission Limitations:

- a. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne [401 KAR 63:010, Section 3].
- b. Discharge of visible fugitive dust emissions beyond the property line is prohibited [401 KAR 63:010, Section 3].

3. Testing Requirements:

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:

See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 1, 2, and 3.

5. Specific Recordkeeping Requirements:

Records of the water circulation rates shall be maintained on a monthly basis, in millions of gallons of water throughput [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

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

Permit Number: V-12-028 R1

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

Emission Unit 26: Limestone Handling and Processing
Emission Unit 28: Limestone Handling and Processing

Description:

Construction commenced: April 2006
 Controls: Enclosures and moist material

EU 26 Equipment includes: Conveyors L2, L3, and transfer points
 Maximum Operating Rate: 1,000 Tons per hour, each

EU 28 Equipment includes: Conveyors L4, L5, L6, L7, and transfer points
 Maximum Operating Rate: 225 Tons per hour, each

APPLICABLE REGULATIONS:

40 CFR 60, Subpart OOO, Standards of Performance for Non-metallic Mineral Processing Plants, applies to each of the emissions units listed above, commenced after August 31, 1983 but before April 22, 2008

1. Operating Limitations:

NA

2. Emission Standards:

Opacity from each of these emission units shall not exceed 10 percent [40 CFR 60.672(b)].

Compliance Demonstration Method:

Compliance with the opacity emission limit shall be demonstrated by qualitative visual observation and Method 9 testing as required in sub-Section 4.a., **Specific Monitoring Requirements**.

3. Testing Requirements:

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 the units on a weekly basis and maintain a log of the observations. If visible emissions from the units are seen, then an inspection shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate [401 KAR 52:020, Section 10].
- b. The permittee shall monitor the amount of limestone processed, in tons, on a monthly basis [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

4. Specific Monitoring Requirements (Continued):

- c. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 1, 2, and 3.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the amount of limestone processed, in tons, on a monthly basis [401KAR 52:020, Section 10].
- b. The permittee shall maintain records of the weekly log of qualitative visual observations of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

- a. The permittee shall report the number of excursions above the opacity standard, date and time of the excursions and opacity value of the excursion semiannually [401 KAR 52:020, Section 10].
- b. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 5, 6, 7, and 8.

7. Specific Control Equipment Operating Conditions:

- a. The air pollution control equipment (including but not limited to enclosures) shall be used to maintain compliance with applicable requirements, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].
- b. Records regarding the maintenance of the air pollution control equipment (including but not limited to enclosures) shall be maintained [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

Imber

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

Emission Unit 29: Limestone Handling and Processing

Description:

Equipment Includes: 3 Wet limestone sizing screens, 3 wet limestone mills, conveyors and transfer points.

Maximum Operating Rate: 100 Tons per hour, each

Controls: Building enclosure and Wet Process

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

NON-APPLICABLE REGULATIONS:

40 CFR 60, Subpart OOO, Standards of Performance for Non-metallic Mineral Processing Plants, does not apply as these are wet material processing operations [40 CFR 60.670(a)(2)].

1. Operating Limitations:

NA

2. Emission Standards:

- a. Visible emissions shall not exceed 20% opacity [401 KAR 59:010, Section 3(1)(b)].
- b. Visible emissions shall not remain visible beyond the lot line of the property [401 KAR 59:010, Section 3(1)(b)].

Compliance Demonstration Method:

Compliance with visible emission standards shall be demonstrated by sub-Section 4.a., **Specific Monitoring Requirements.**

3. Testing Requirements:

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 the openings and vents of the building on a weekly basis and maintain a log of the observations. If visible emissions are seen, then an inspection shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the process shall be shut down and shall not operate again until repairs have been made that result in no visible emissions from the process during operation. In lieu of shutting the process down, the permittee may determine the opacity using Reference Method 9. If the opacity limit is not exceeded, the process may continue to operate [401 KAR 52:020, Section 10].
- b. See Section F, **Monitoring, Recordkeeping, and Reporting**, Conditions 1, 2, and 3.

Permit Number: V-12-028 R1

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

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the weekly log of qualitative visual observations of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any visible emissions [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

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

7. Specific Control Equipment Operating Conditions:

a. The air pollution control equipment (including but not limited to enclosures) shall be used to maintain compliance with applicable requirements, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].

b. Records regarding the maintenance of the air pollution control equipment (including but not limited to enclosures) shall be maintained [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

Emission Unit 34: Emergency Air Compressor Engine

Description:

Caterpillar C15 engine Tier III rated

Primary Fuel: # 2 distillate oil (diesel)

Rated Capacity: 540 hp

Manufactured: 2006

Construction commenced: 2009

APPLICABLE REGULATIONS:

40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

1. Operating Limitations:

This engine is not required to meet any of the requirements of 40 CFR 63, Subpart ZZZZ, or 40 CFR 63, Subpart A, except for the initial notification requirements of 40 CFR 63.6645(f) [40 CFR 63.6590(b)(1)(i)].

Compliance Demonstration Method:

The notification was submitted March 3, 2010.

2. Emission Limits:

N/A

3. Testing Requirements:

N/A

4. Specific Monitoring Requirements:

The permittee shall monitor hours of operation and fuel usage (gallons) for this engine [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of hours of operation and fuel usage (gallons) for this engine [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

N/A

Permit Number: V-12-028 R1

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

Emission Unit 35: Ash Landfill Operations and Haul Trucks

Description:

Fugitive operations tied to material transport/vehicle movement of dry material

Construction commenced: June 2012

Ash landfill

Construction commenced: October 2012

Controls: Wet Suppression by watering, cleaning and road maintenance

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions

NON-APPLICABLE REGULATION:

40 CFR 60, Subpart WWW, Standards of Performance for Municipal Solid Waste Landfills

1. Operating Limitations:

- a. The permittee shall not accept any waste from the public. The landfill shall not receive any material other than gypsum and fly ash products [to preclude 40 CFR 60, Subpart WWW].
- b. No person shall 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:
 1. Use, where possible, of water or chemicals for control of dust in the demolition of existing building 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;
 3. 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;
 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.

[401 KAR 63:010, Section 3(1)]

Permit Number: V-12-028 R1

Imber

SECTION B - EMISSION UNITS, EMISSION POINTS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**1. Operating Limitations (Continued):**

- c. Discharge of visible fugitive dust emissions beyond the property line is prohibited [401 KAR 63:010, Section 3(2)].
- d. When dust, fumes, gases, mist, odorous matter, vapors, or any combination thereof escape from the landfill or equipment in such a manner and amount as to cause a nuisance or to violate any administrative regulation, the secretary may 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)].
- e. At all times when in motion, open bodied trucks, operating outside company property, transporting materials likely to become airborne shall be covered. No one shall 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].

2. Emission Limitations:

The permittee shall not cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate [401 KAR 63:010, Section 2].

Compliance Demonstration:

The permittee shall demonstrate compliance with this requirement by good procedures listed above, posting a 15 mile per hour sign for each road way to be enforced as a speed limit, and meeting the requirements of sub-Sections 4., **Specific Monitoring Requirements**, and 5., **Specific Recordkeeping Requirements**.

3. Testing Requirements:

N/A

4. Specific Monitoring Requirements:

- a. The permittee shall monitor actions 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 monthly basis [401 KAR 52:020, Section 10].
- b. The permittee shall monitor the rate of material hauled (tons, VMT, gallons/hr, etc.) for each unit or vehicle on paved and unpaved roadways on a monthly basis [401 KAR 52:020, Section 10].
- c. Visual observations shall be made each operating day to determine if fugitive dust is becoming airborne from associated operations as a result of vehicular traffic or windy conditions on paved and unpaved roadways. If such a condition develops, water or a chemical wetting agent shall be applied to these areas as specified in 401 KAR 63:010 as listed above.

Permit Number: V-12-028 R1

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

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the visual observations and actions taken to prevent the discharge of visible fugitive emissions beyond the property line on a monthly basis [401 KAR 52:020, Section 10].
- b. The permittee shall maintain records of the processing rate (tons, VMT, gallons/hr, etc.) for each vehicle or unit for paved and unpaved roadways on a monthly basis [401 KAR 52:020, Section 10].
- c. Records regarding the maintenance and use of the air pollution control equipment (spray nozzles) shall be maintained [401 KAR 52:020, Section 10].
- d. The permittee shall maintain records of the calculations to determine the fugitive emissions from paved and unpaved roads with all data used in calculations. Emission calculations shall be based on the most current AP-42 emission factors for paved and unpaved roadways for that year.

6. Specific Reporting Requirements:

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

7. Specific Control Equipment Operating Conditions:

The associated air pollution control equipment for the emission unit shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and standard operating practices [401 KAR 50:055].

Permit Number: V-12-028 R1

Imber

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

Emission Unit 40: One Emergency Stationary RICE

Emission Unit	Make	Location	Manufacture Date	Hp Rating	Fuel	Control Equipment
40	Cummins	Fire Pump	1972	340 HP	Diesel	None

APPLICABLE REGULATIONS:

40 CFR 63, Subpart ZZZZ – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

1. Operating Limitations:

- a. No later than May 3, 2013 [40 CFR 63.6595(a)(1)] , the permittee shall be in compliance with the applicable emission limitations, operating limitations, and other requirements in 40 CFR 63, Subpart ZZZZ at all times [40 CFR 63.6605(a)].
- b. No later than May 3, 2013 [40 CFR 63.6595(a)(1)], at all times the permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the 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)].
- c. Beginning January 1, 2015, if the stationary emergency RICE is operated or is contractually obligated to be available for more than fifteen (15) hours per year for the purposes of demand response as specified in 40 CFR 63.6640(f), the permittee must use diesel fuel that meets the requirements in 40 CFR 80.510(b) 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)].
- d. The permittee shall operate and maintain the stationary emergency RICE and any after-treatment control devices according to the manufacturer's emission-related written instructions or develop the permittee's own maintenance plan which must 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)].
- e. The permittee shall minimize the stationary emergency RICE'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 thirty (30) minutes [40 CFR 63.6625(h)].
- f. In order for the emergency stationary RICE to be considered an emergency engine under 40 CFR 63, Subpart ZZZZ, the permittee must operate the emergency stationary RICE

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

1. Operating Limitations (Continued):

according to the requirements for emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for fifty (50) hours per year, as described in 40 CFR 63.6640(f). There is no time limit on the use of emergency stationary RICE in emergency situations, when those emergency situations meet the requirements of 40 CFR 63.6640(f).

- g. The permittee shall change the oil and filter every five hundred (500) hours of operation or annually, whichever comes first. The permittee shall inspect the air cleaner every one thousand (1,000) hours of operation or annually, whichever comes first, and replace as necessary. The permittee shall inspect all hoses and belts every five hundred (500) hours of operation or annually, whichever comes first, and replace as necessary [40 CFR 63 Subpart ZZZZ, Table 2c., Item 1.]. The permittee has the option of utilizing an oil analysis program as specified in 40 CFR 63.6625(i) in order to extend the specified oil change requirement.

2. Emission Limitations:

N/A

3. Testing Requirements:

N/A

4. Specific Monitoring Requirements:

- a. By no later than May 3, 2013, 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 and collect data according to 40 CFR 63.6635.

5. Specific Recordkeeping Requirements:

- a. The permittee must keep records of each notification and report that is submitted, the occurrence and duration of each malfunction of operation of any air pollution control and monitoring equipment, records of performance tests and performance evaluations as required in 40 CFR 63.10(b)(2)(viii), records of all required maintenance performed on any air pollution control and monitoring equipment, and 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 60.6655(a)].
- b. The permittee shall maintain records of the maintenance conducted on the engines in order to demonstrate that the engines were operated and maintained, including any after-treatment control devices, according to the maintenance plans for the engines [40 CFR 63.6655(e)].
- c. Records must be in a form suitable and readily available for expeditious review according to 40 CFR 63.10(b)(1). The permittee must keep each record readily accessible in hard copy or electronic form. The permittee must keep each record for five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1) [40 CFR 63.6660].

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

5. Specific Recordkeeping Requirements (Continued):

- d. The permittee must keep records of the hours of operation of the engines that is recorded through the non-resettable hour meters. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response, records must be kept of the notification of the emergency situation, and the time the engines were operated as part of demand response [40 CFR 63.6655(f)(1)].

6. Specific Reporting Requirements:

- a. The permittee must report each instance in which the operating limitations in sub-Section 1., **Operating Limitations**, have not been met. These instances are deviations from the emission and operating limitation in 40 CFR 63 Subpart ZZZZ and must be reported according to 40 CFR 63.6650 [40 CFR 63.6640(b)].
- b. The permittee must report each instance in which the requirements of Table 8. to 40 CFR 63 Subpart ZZZZ, that apply, have not been met [40 CFR 63.6640(e)]. The notifications listed in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (f)(6), 40 CFR 63.9(b) through (e), and (g) are not required [40 CFR 63.6645(a)(5)].
- c. See Section F., **Monitoring, Recordkeeping, and Reporting Requirements**.

Permit Number: V-12-028 R1

Imber

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

Emission Units: 36-39

Four Emergency Generator Engines

Emission Unit	Make	Location	Manufacture Date	Hp Rating	Fuel	Control Equipment
36	Caterpillar	Unit 3	1980	755 HP	Diesel	None
37	Caterpillar	Unit 4	1983	755 HP	Diesel	None
38	Caterpillar	Unit 1	1972	505 HP	Diesel	None
39	Caterpillar	Unit 2	1976	505 HP	Diesel	None

APPLICABLE REGULATIONS:

401 KAR 63:002, 40 CFR Part 63 national emission standards for hazardous air pollutants, incorporating by reference **40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines**. However, these engines do not have to meet the requirements of 40 CFR 63, Subpart ZZZZ or 40 CFR 63, Subpart A, including notification requirements [40 CFR 63.6590(b)(3)(ii)].

1. Operating Limitations:

N/A

2. Emission Limitations:

N/A

3. Testing Requirements:

N/A

4. Specific Monitoring Requirements:

The permittee shall monitor hours of operation for these engines [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of hours of operation for these engines [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

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

Permit Number: V-12-028 R1

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

Emission Unit 41: Non-Emergency Diesel-fired Generator Engine

Description:

Kubota V3600-T-E3BG engine, Tier IV rated
 Primary Fuel: low sulfur diesel
 Rated Capacity: 53 hp
 Manufactured: 2013
 Construction commenced: 2013

APPLICABLE REGULATIONS:

40 CFR 60, Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. Although this regulation is applicable to this engine, the permittee shall meet the requirements of this regulation by meeting the requirements of 40 CFR 60, Subpart III. No further requirements apply to this engine under 40 CFR 63, Subpart ZZZZ.

1. Operating Limitations:

The permittee shall purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel [40 CFR 60.4207(b)].

2. Emission Limitations:

a. The permittee shall comply with the emission standards for new CI engines in 40 CFR 60.4201, as applicable [40 CFR 60.4204(b)].

Compliance Demonstration Method:

The permittee shall purchase the engine certified to the emissions standards above, for the same model year and maximum engine power. The engine shall be installed and configured according to manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g) [40 CFR 60.4211(c)]. The permittee shall operate and maintain the engine according to manufacturer's emission-related written instructions; change only those settings that are permitted by the manufacturer; and meet the requirements of 40 CFR Parts 89, 94, or 1068 as they apply to the engine [40 CFR 60.4211(a)].

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

3. Testing Requirements:

N/A

4. Specific Monitoring Requirements:

The permittee shall monitor hours of operation for this engine [401 KAR 52:020, Section 10].

Permit Number: V-12-028 R1

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

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of hours of operation for this engine [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

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

Permit Number: V-12-028 R1**SECTION C – INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and qualitative visible emission evaluation made. The results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause and any conservative actions taken for any abnormal visible emissions.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. The following fuel oil storage tanks:	
525,000 gallons	None
100,000 gallons	None
20,000 gallons	None
12,000 gallons	None
1000 gallons	None
five 500 gallons	None
two 150 gallons	None
one 300 gallons	None
three 240 gallons	None
two 500 gallons (Kerosene)	None
2. The following unleaded gasoline storage tanks:	
one 1000 gallons	401 KAR 59:050
one 500 gallon	401 KAR 59:050
3. The following lubricating oil storage tanks:	
four 15,000 gallon tanks	None
four 550 gallon motor oil tanks	None
4. SO ₃ mitigation system	401 KAR 59:010
5. Infrequent evaporation of boiler cleaning solutions	401 KAR 59:010
6. Paved and unpaved roadways (at plant)	401 KAR 63:010
7. Infrequent burning of deminimis quantities of used oil for energy recovery	None
8. Limestone slurry transfer from slurry tanks to scrubbers	401 KAR 59:010
9. Bottom ash handling process	401 KAR 63:010
10. Fly ash handling process	401 KAR 63:010

Permit Number: V-12-028 R1**SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**

11. Gypsum processing (no crushing or grinding)	401 KAR 63:010
12. Fly ash separator units (4)	401 KAR 59:010
13. Fly ash storage silos (3)	401 KAR 59:010
14. Landfill truck loading station	401 KAR 63:010
15. Bottom ash transport	401 KAR 63:010
16. Fly ash transport	401 KAR 63:010
17. Gypsum transport	401 KAR 63:010
18. Storage pile at landfill truck station	401 KAR 63:010
19. Active area of the landfill (wind erosion)	401 KAR 63:010
20. Powdered Activated Carbon handling for each boiler	401 KAR 63:010
21. Turbine Oil Reservoirs for Units 1-4 four at 11,500 gallons	None
22. FGD Forced Oxidation Blower lube oil cooler turbine oil reservoirs for Units 1-4 (nine at 110 gallons)	None
23. Coal Mill gear box oil reservoirs for Units 1-4 (24 at 375 gallons)	None
24. FGD hydraulic control valve hydraulic fluid Reservoirs for Units 1-4 (4 at 165 gallons)	None
25. Electro-hydraulic control system EH fluid Reservoirs for Units 2, 3, and 4 (3 at 375 gallons)	None
26. Electro-hydraulic control system EH fluid Reservoir for Unit 1 (1 at 165 gallons)	None
27. ID fan lube oil turbine oil reservoirs for Units 1 and 2 (4 at 180 gallons)	None
28. Hydrogen seal oil turbine oil reservoirs for Units 2,3, and 4 (3 at 605 gallons)	None
29. Hydrogen seal oil turbine oil reservoir for Unit 1 (1 at 350 gallons)	None

Permit Number: V-12-028 R1**SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**

- | | |
|--|------|
| 30. Boiler feed pump turbine oil reservoir for Unit 1 (2 at 900 gallons) | None |
| 31. Boiler feed pump turbine oil reservoir for Unit 2 (2 at 1,000 gallons) | None |
| 32. Limestone ball mill lubricating oil reservoirs (3 at 250 gallons) | None |
| 33. Coal unloading bucket drive lubricating oil Reservoir (1 at 150 gallons) | None |
| 34. ID fan lubricating oil reservoirs for Units 3 and 4 (4 at 150 gallons) | None |
| 35. Turbine oil reservoirs for Units 3 and 4 (2 at 500 gallons) | None |
| 36. Limestone surge bin with dust collector | None |

Permit Number: V-12-028 R1

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. PM, SO₂, Sulfuric Acid Mist, NO_x and visible emissions (opacity) as measured by applicable reference methods, or an equivalent or alternative method specified in 40 CFR Chapter 1, or by a test method specified in the approved state implementation plan shall not exceed the respective limitations specified herein. Compliance with the visible emissions limitations for the indirect heat exchangers (emissions unit 01, 02, 03, and 04) shall be determined using continuous particulate matter monitoring data, visual observations, and Reference Method 9 as applicable.

Permit Number: V-12-028 R1

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].
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.

Permit Number: V-12-028 R1

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

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 owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [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].

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
 - f. The certification shall be submitted by January 30th of each year. Annual compliance certifications shall be sent to the following addresses:

Division for Air Quality
 Florence Regional Office
 8020 Veterans Memorial Drive,
 Suite 110
 Florence, KY 41042

U.S. EPA Region 4
 Air Enforcement Branch
 Atlanta Federal Center
 61 Forsyth St.
 Atlanta, GA 30303-8960

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

Permit Number: V-12-028 R1

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

SECTION G - GENERAL PROVISIONS (CONTINUED)

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.].
- l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.
- n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 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.

Permit Number: V-12-028 R1

SECTION G - GENERAL PROVISIONS (CONTINUED)

- q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
- (1) Applicable requirements that are included and specifically identified in this permit; and
 - (2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

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

3. Permit Revisions

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

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

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, dry sorbent injection Hg control and pulse-jet fabric filters for Emission Units 1, 2, 3, and 4, and Emission Unit 35, the ash landfill, in accordance with the terms and conditions of this permit.

- a. Construction of any process and air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- 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, with a copy to the Division's Frankfort Central Office, 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. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate, thereafter, only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or 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 one-hundred-eighty (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. Testing Requirements

- a. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- 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 (45) days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

- a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.
- b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NO_x 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 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - (5) This requirement does not relieve the source of other local, state or federal notification requirements.

SECTION G - GENERAL PROVISIONS (CONTINUED)

- b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
- c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

- a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Service of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

- a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

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

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

Permit Number: V-12-028 R1

SECTION H – ALTERNATE OPERATING SCENARIOS

N/A

SECTION I – COMPLIANCE SCHEDULE

N/A

Permit Number: V-12-028 R1**SECTION J -ACID RAIN PERMIT****1. Statutory and Regulatory Authority**

In accordance with KRS 224.10-100 and Titles 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.

2. Permit Requirements:

This Acid Rain Permit covers Acid Rain Units 1-4 (Emission Units 01-04). They are coal-fired base load electric generating units. The Acid Rain Permit Application and NO_x Compliance Plan received on July 3, 2007 are hereby incorporated into and made part of this permit and the permittee must 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 set in 40 CFR 73.10, Table 2, 40 CFR 76.5, and 40 CFR 76.11 and they are tabulated in the table below:

Affected Unit: 1					
Year for SO₂ Allowances	2012	2013	2014	2015	2016
40 CFR Part 73.10	12,272*	12,272*	12,272*	12,272*	12,272*
NO_x Limits and Requirements					
<p>(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 2012 through 2016. 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.</p> <p>(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.</p> <p>(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).</p>					
<p>In addition to the described NO_x compliance plan, 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.</p>					

Permit Number: V-12-028 R1

Imber

SECTION J -ACID RAIN PERMIT (CONTINUED)

* 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).

Affected Unit: 2					
Year for SO₂ Allowances	2012	2013	2014	2015	2016
40 CFR Part 73.10	10,038*	10,038*	10,038*	10,038*	10,038*
NO_x Limits and Requirements					
<p>(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 2012 through 2016. 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 0.40 lb/MMBtu.</p> <p>(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.</p> <p>(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).</p> <p>In addition to the described NO_x compliance plan, 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.</p>					

* 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).

Permit Number: V-12-028 R1

Imber

SECTION J -ACID RAIN PERMIT (CONTINUED)

Affected Unit: 3					
Year for SO₂ Allowances	2012	2013	2014	2015	2016
40 CFR Part 73.10	13,985*	13,985**	13,985*	13,985*	13,985*
NO_x Limits and Requirements					
<p>(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 2012 through 2016. 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 0.46 lb/MMBtu.</p> <p>(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.</p> <p>(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).</p> <p>In addition to the described NO_x compliance plan, 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.</p>					

* 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).

Permit Number: V-12-028 R1

Imber

SECTION J -ACID RAIN PERMIT (CONTINUED)

Affected Unit: 4					
Year for SO₂ Allowances	2012	2013	2014	2015	2016
40 CFR Part 73.10	13,742*	13,742*	13,742*	13,742*	13,742*
NO_x Limits and Requirements					
<p>(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 2012 through 2016. 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 0.46 lb/MMBtu.</p> <p>(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.</p> <p>(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).</p> <p>In addition to the described NO_x compliance plan, 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.</p>					

* 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).

4. Compliance Plan:

- a. The permittee shall operate in compliance with the requirements contained in the Acid Rain application and incorporated into this permit [40 CFR 72.9].
- b. The Division approves the NO_x Average Plan submitted for these units for the NO_x Emissions Compliance Plan, effective for the duration of this permit. Under this plan, a unit's NO_x emissions shall not exceed the applicable annual average alternative contemporaneous emissions limitation (ACEL) listed in Subsection 3(a). [40 CFR 76]
 - (1) The actual Btu-weighted annual average NO_x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x emission rate for the same unit had it been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7 and listed in Subsection 3(a).

SECTION J -ACID RAIN PERMIT (CONTINUED)

- (2) For each unit, if the designated representative demonstrates that the requirement of Subsection 4(b)(1) is met for the plan year, then the unit shall be deemed to be in compliance for the year with its ACEL and associated heat input limit in Subsection 3.
- (3) If the designated representative cannot make the demonstration in Subsection 4(b)(1), according to 40 CFR 76.11(d)(1)(ii), for the plan year and if a unit fails to meet the annual average ACEL or has a heat input greater than the applicable value listed in Subsection 3, then excess emissions of NO_x have occurred during the year for that unit.
- (4) As an alternative means of compliance demonstration, this emission unit shall not cause the system weighted average to exceed the applicable emission rate in accordance with 40 CFR 76.11(d)(B)(ii).

SECTION K – CLEAN AIR INTERSTATE RULE (CAIR)

1) Statement of Basis

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

2) CAIR Application

The CAIR application for four electrical generating units was submitted to the Division and received on July 3, 2007. CAIR Requirements contained in that application are hereby incorporated into and made part of this Permit. Pursuant to 401 KAR 52:020, Section 3, the source shall operate in compliance with those requirements.

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

The Affected unit is four (4) pulverized coal-fired steam generators (Emission Units 01-04). The affected units each have a nameplate capacity to generate greater than 25 megawatts of electricity, which is offered for sale. The unit uses coal as fuel source, and are authorized as base load electric generating units.

4) Summary of Actions

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.

A December 2008 court decision kept the requirements of CAIR in place temporarily but directed EPA to issue a new rule to implement Clean Air Act requirements concerning the transport of air pollution across state boundaries. On July 6, 2011, the U.S. EPA finalized the Cross-State Air Pollution Rule (CSAPR). On December 30, 2011, CSAPR was stayed prior to implementation. On April 29, 2014, the U.S. Supreme Court issued an opinion reversing an August 21, 2012 D.C. Circuit decision that had vacated CSAPR. Following the remand of the case to the D.C. Circuit, EPA requested that the court lift the CSAPR stay and toll the CSAPR compliance deadlines by three years. On October 23, 2014, the D.C. Circuit granted EPA's request. CSAPR Phase I 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 TR subject unit(s), and the unit-specific monitoring provisions at this source, are identified in the following table(s). These unit(s) are subject to the requirements for the Insert TR NO_x Annual Trading Program, TR NO_x Ozone Season Trading Program, and TR SO₂ Group 1 Trading Program.

Unit ID: 01-04, four pulverized coal-fired indirect heat exchangers					
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	X				
NO _x	X				
Heat input	X				

1. The above description of the monitoring used by a unit does not change, create an exemption from, or otherwise affect the monitoring, recordkeeping, and reporting requirements applicable to the unit under 40 CFR 97.430 through 97.435 (TR NO_x Annual Trading Program), 97.530 through 97.535 (TR NO_x Ozone Season Trading Program), 97.630 and through 97.635 (TR 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 TR 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 at <http://www.epa.gov/airmarkets/emissions/monitoringplans.html>.
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 (TR NO_x Annual Trading Program), 97.535 (TR NO_x Ozone Season Trading Program), and 97.635 (TR 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/emissions/petitions.html>.

Permit Number: V-12-028 R1

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

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 (TR NO_x Annual Trading Program), 97.530 through 97.534 (TR NO_x Ozone Season Trading Program), and 97.630 through 97.634 (TR 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 (TR NO_x Annual Trading Program), 97.535 (TR NO_x Ozone Season Trading Program), and 97.635 (TR 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 EPA's website at <http://www.epa.gov/airmarkets/emissions/petitions.html>.
5. The descriptions of monitoring applicable to the unit included above meet the requirement of 40 CFR 97.430 through 97.434 (TR NO_x Annual Trading Program), 97.530 through 97.534 (TR NO_x Ozone Season Trading Program), and 97.630 through 97.634 (TR 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 to or change this unit's monitoring system description.