PERMIT-TO-INSTALL APPLICATION
VOLUME II

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)
AND
BEST AVAILABLE TECHNOLOGY (BAT)

For:
AMERICAN MUNICIPAL POWER
GENERATING STATION

Submitted By:
AMERICAN MUNICIPAL POWER-OHIO, INC.

May 2006

GT
Environmental, Inc.

635 Park Meadow Road, Suite 112
Westerville, Ohio 43081
(614) 794-3570
BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS

For:
AMERICAN MUNICIPAL POWER GENERATING STATION

Submitted By:
AMERICAN MUNICIPAL POWER-OHIO, INC.

May 2006
# BEST AVAILABLE CONTROL TECHNOLOGY (BACT) ANALYSIS
FOR
AMERICAN MUNICIPAL POWER GENERATING STATION

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1.1 INTRODUCTION AND SUMMARY</td>
<td>1</td>
</tr>
<tr>
<td>1.1.1 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1.2 Definition of BACT</td>
<td>3</td>
</tr>
<tr>
<td>1.1.3 Top Down BACT Procedure</td>
<td>3</td>
</tr>
<tr>
<td>1.1.4 BACT Summary</td>
<td>4</td>
</tr>
<tr>
<td>1.1.5 Use of Other Coal-Fired Power Plant PSD Permits</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>2.1 MAIN BOILER BACT FOR NITROGEN OXIDES (NO$_x$)</td>
<td>11</td>
</tr>
<tr>
<td>2.1.1 General Description of NO$_x$ Formation</td>
<td>11</td>
</tr>
<tr>
<td>2.1.2 Top Down BACT Process</td>
<td>11</td>
</tr>
<tr>
<td>2.1.3 - BACT Step 1 - Identify Available Control Technologies</td>
<td>11</td>
</tr>
<tr>
<td>2.1.3.1 Low NO$_x$ Combustion Systems</td>
<td>11</td>
</tr>
<tr>
<td>2.1.3.2 Flue Gas Recirculation (FGR)</td>
<td>12</td>
</tr>
<tr>
<td>2.1.3.3 Selective Catalytic Reduction (SCR)</td>
<td>12</td>
</tr>
<tr>
<td>2.1.3.4 Selective Non-Catalytic Reduction (SNCR)</td>
<td>12</td>
</tr>
<tr>
<td>2.1.4 - BACT Step 2 – Eliminate Technically Infeasible Options</td>
<td>12</td>
</tr>
<tr>
<td>2.1.5 - BACT Step 3 – Rank Feasible Control Technologies by Control Effectiveness</td>
<td>13</td>
</tr>
<tr>
<td>2.1.6 - BACT Step 4 – Evaluation and Selection of BACT</td>
<td>13</td>
</tr>
<tr>
<td>2.1.7 Comparison of Proposed BACT with Other Recent PSD Permits</td>
<td>13</td>
</tr>
<tr>
<td>2.1.8 Comparison of Proposed BACT with Other Applicable Regulations</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>3.1 MAIN BOILER BACT FOR SULFUR DIOXIDE (SO$_2$)</td>
<td>16</td>
</tr>
<tr>
<td>3.1.1 General Description of SO$_2$ Formation</td>
<td>16</td>
</tr>
<tr>
<td>3.1.2 Fuel Flexibility</td>
<td>16</td>
</tr>
<tr>
<td>3.1.3 Top Down BACT Process</td>
<td>16</td>
</tr>
<tr>
<td>3.1.4 - BACT Step 1 - Identify Available Control Technologies</td>
<td>16</td>
</tr>
<tr>
<td>3.1.4.1 Wet Flue Gas Desulfurization (Wet FGD)</td>
<td>16</td>
</tr>
<tr>
<td>3.1.4.2 Dry Flue Gas Desulfurization (Dry FGD)</td>
<td>17</td>
</tr>
<tr>
<td>3.1.5 - BACT Step 2 – Eliminate Technically Infeasible Options</td>
<td>17</td>
</tr>
<tr>
<td>3.1.6 - BACT Step 3 – Rank Feasible Control Technologies by Control Effectiveness</td>
<td>17</td>
</tr>
<tr>
<td>3.1.7 - BACT Step 4 – Evaluation and Selection of BACT</td>
<td>17</td>
</tr>
<tr>
<td>3.1.8 Comparison of Proposed BACT with Other Recent PSD Permits</td>
<td>17</td>
</tr>
<tr>
<td>3.1.9 Comparison of Proposed BACT with Other Applicable Regulations</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>4.1 MAIN BOILER BACT FOR PARTICULATE MATTER (PM$_{10}$)</td>
<td>20</td>
</tr>
<tr>
<td>4.1.1 General Description of PM$_{10}$ Formation</td>
<td>20</td>
</tr>
<tr>
<td>4.1.2 Issues Pertaining to PM$_{10}$ BACT</td>
<td>20</td>
</tr>
<tr>
<td>4.1.3 Top Down BACT Process</td>
<td>21</td>
</tr>
</tbody>
</table>
9 COOLING CELLS BACT ........................................................................................................39
BACT ..............................................................................................................................39
Comparison of BACT with Other Rules.................................................................39

10 MATERIAL HANDLING AND OTHER FUGITIVE DUST PRODUCING
OPERATIONS BACT ....................................................................................................40
BACT ..............................................................................................................................40
Comparison of BACT with Other Rules.................................................................41

11 FERTILIZER PLANT BACT ........................................................................................43
BACT ..............................................................................................................................43
Comparison of BACT with Other Rules.................................................................44

APPENDIX A – PSD Permits for Comparable Pulverized Coal-Fired Boilers
   Prairie State Generating Company, LLC
   Thoroughbred Generating Company, LLC
   Longview Power, LLC
   Santee Cooper Cross Generating Station
   Elm Road Generating Station

APPENDIX B – Lists of Pulverized Coal-Fired Boiler Projects

APPENDIX C – RBLC Query Results
LIST OF TABLES

Table Page
1-1 List of Emissions Units ..........................................................................................................................1
1-2 Summary of Proposed BACT Emission Control Strategies for Pulverized Coal-Fired
    Boilers (B001 and B002) ..........................................................................................................................4
1-3 Summary of Proposed BACT Emission Control Strategies for Auxiliary Boiler (B003).....6
1-4 Summary of Proposed BACT Emission Control Strategies for Fugitive Dust from
    Landfill (F001) and Paved and Unpaved Roadways (F002) .................................................................6
1-5 Summary of Proposed BACT Emission Control Strategies for Cooling
    Cells (P001 and P002) ..............................................................................................................................7
1-6 Summary of Proposed BACT Emission Control Strategies for Fertilizer Plant (P003).....7
1-7 Summary of Proposed BACT Emission Control Strategies for Material Handling
    Emissions Units (P901, P902, P903, P904 and P905) ....................................................................8
1-8 Summary of Proposed BACT Emission Control Strategies for Emergency Generator
    (Z001) .......................................................................................................................................................8
1-9 Summary of Proposed BACT Emission Control Strategies for Fire Water
    Pump (Z002) ...........................................................................................................................................9
1-10 Recent Comparable PSD Permits .........................................................................................................10
2-1 Comparison of Proposed NO\textsubscript{x} BACT with Other Recent Comparable PSD Permits.....13
2-2 Comparison of Proposed NO\textsubscript{x} BACT with Other Applicable Requirements ............14
3-1 Comparison of Proposed SO\textsubscript{2} BACT with Other Recent Comparable PSD Permits ....18
3-2 Comparison of Proposed SO\textsubscript{2} BACT with Other Applicable Requirements ............19
4-1 Comparison of Proposed PM\textsubscript{10} BACT with Other Recent Comparable PSD Permits ....23
4-2 Comparison of Proposed PM\textsubscript{10} BACT with Other Applicable Requirements ............25
5-1 Comparison of Proposed CO and VOC BACT with Other Recent
    Comparable PSD Permits .......................................................................................................................29
5-2 Comparison of Proposed CO and VOC BACT with Other Applicable Requirements ....30
6-1 Comparison of Proposed H₂SO₄ BACT with Other Recent Comparable PSD Permits ....32

7-1 Summary of Proposed BACT Emission Control Strategies for Auxiliary Boiler (B003) .34

7-2 Comparison of Proposed BACT for Auxiliary Boiler (B003) with Other Applicable Requirements ........................................................................................................35

8-1 Summary of Proposed BACT Emission Control Strategies for Emergency Generator (Z001) ...........................................................................................................................................36

8-2 Summary of Proposed BACT Emission Control Strategies for Fire Water Pump (Z002) ...........................................................................................................................................37

8-3 Comparison of Proposed BACT for Emergency Diesel Engines (Z001 and Z002) with Other Applicable Requirements ........................................................................................................37

9-1 Summary of Proposed BACT Emission Control Strategies for Cooling Cells (P001 and P002) ...........................................................................................................................................39

10-1 Summary of Proposed BACT Emission Control Strategies for Fugitive Dust from Landfill (F001) and Paved and Unpaved Roadways (F002) ...........................................................................41

10-2 Summary of Proposed BACT Emission Control Strategies for Material Handling Emissions Units (P901, P902, P903, P904 and P905) ...................................................................................41

10-3 Comparison of Proposed BACT for Material Handling and Other Fugitive Dust Producing Operations with Other Applicable Requirements ..............................................................................41

11-1 Summary of Proposed BACT Emission Control Strategies for Fertilizer Plant (P003) ....43

11-2 Comparison of Proposed BACT for Fertilizer Plant (P003) with Other Applicable Requirements ..........................................................................................................................44
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Proposed AMPGS General Emissions Unit Schematic Diagram</td>
<td>2</td>
</tr>
<tr>
<td>1-2</td>
<td>Main Boiler (B001 and B002) BACT Control System Flow Diagram</td>
<td>5</td>
</tr>
</tbody>
</table>
SECTION 1  INTRODUCTION AND SUMMARY

INTRODUCTION

American Municipal Power-Ohio, Inc. (AMP-Ohio) proposes to construct and operate a new pulverized coal-fired power plant, identified as the American Municipal Power Generating Station, in Meigs County, Ohio (AMPGS). Pursuant to O.A.C. §3745-31-15, AMPGS will be a Prevention of Significant Deterioration (PSD) major stationary source. Specifically, the AMPGS is subject to PSD for the following air pollutants: nitrogen oxides (NOₓ), sulfur dioxide (SO₂), particulate matter (PM), particulate matter less than 10 microns (PM₁₀), carbon monoxide (CO), volatile organic compounds (VOC) and sulfuric acid (H₂SO₄). As a result, the air permit application for the AMPGS includes this Best Available Control Technology (BACT) analysis for each of these air pollutants.

The AMPGS will consist of the emissions units identified in Table 1-1. Figure 1-1 is a schematic diagram that identifies these emissions units.

<table>
<thead>
<tr>
<th>Emissions Unit ID(1)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B001B002 5,191 mmBtu/hr Pulverized Coal-Fired Boiler (net 480 MW electric generating unit)</td>
<td></td>
</tr>
<tr>
<td>B003 150 mmBtu/hr Natural Gas-Fired Boiler (100,000 lb/hr steam intermittent use auxiliary boiler)</td>
<td></td>
</tr>
<tr>
<td>F001 Landfill</td>
<td></td>
</tr>
<tr>
<td>F002 &amp; F003 Paved Roadways and Unpaved Roadways</td>
<td></td>
</tr>
<tr>
<td>F004 Coal Storage Piles</td>
<td></td>
</tr>
<tr>
<td>F005(2) Limestone Barge Unloading</td>
<td></td>
</tr>
<tr>
<td>F006(2) Limestone Storage Piles</td>
<td></td>
</tr>
<tr>
<td>P001 &amp; P002 Cooling Cells for B001 and Cooling Cells for B002</td>
<td></td>
</tr>
<tr>
<td>P003(2) Fertilizer Plant</td>
<td></td>
</tr>
<tr>
<td>P901 Coal Barge Unloading</td>
<td></td>
</tr>
<tr>
<td>P902 Coal Crushing</td>
<td></td>
</tr>
<tr>
<td>P903(2) Limestone Preparation Building</td>
<td></td>
</tr>
<tr>
<td>P904(2) Gypsum Conveying, Handling and Storage</td>
<td></td>
</tr>
<tr>
<td>P905 Flyash Conveying, Handling and Storage for B001</td>
<td></td>
</tr>
<tr>
<td>P906 Flyash Conveying, Handling and Storage for B002</td>
<td></td>
</tr>
<tr>
<td>Z001(3) Diesel Engine Emergency Electric Generating Unit</td>
<td></td>
</tr>
<tr>
<td>Z002(3) Diesel Engine Emergency Fire Water Pump</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

(1) These emissions unit IDs were assigned for reference in this document. Ohio EPA may assign different IDs when the PTI application is processed.

(2) The AMPGS will utilize a Wet FGD control system, but is still considering which reagent to employ. As a result, emissions units needed for both options have been included in this table and in the PTI application.

(3) These diesel engines are exempt from air permit requirements pursuant to the OAC rule 3745-31-03(A)(1)(4)(b) permit-by-rule (i.e., each engine will operate less than 500 hours/rolling 12-month period with low-sulfur diesel fuel). The engines are included in this BACT study to provide information and data that supports the determination that the operational restrictions in OAC rule 3745-31-03(A)(4)(b) constitute BACT.
Figure 1-1
Proposed AMPGS
General Emissions Unit Schematic Diagram

- Paved Roadways (F002)
- Unpaved Roadways (F003)

- Coal Barge Unloading (P901)
- Coal Storage (P004)
- Coal Crushing (P902)

- Limestone Barge Unloading (F005)
- Limestone Storage (F004)

- Landfill (F001)
- Bottom Ash, Flyash & Gypsum

- Pulverized Coal-Fired Boiler #1 (B001)
- Cooling Cells for B001 (P001)

- Pulverized Coal-Fired Boiler #2 (B002)
- Cooling Cells for B002 (P002)

- Boiler #1 Emission Control Systems

- Boiler #2 Emission Control Systems

- Flyash Conveying, Handling & Storage for B001 (P905)
- Fertilizer Plant (P003)

- Boiler #1 Stack

- Boiler #2 Stack

- Flyash Conveying, Handling & Storage for B002 (P906)

- Diesel Engine Emergency Electric Generating Unit (Z001)

- Diesel Engine Emergency Fire Water Pump (Z002)

- Natural Gas-Fired Auxiliary Boiler (B003)

- Diesel Fuel

- Natural gas

- BACT Control Emissions
DEFINITION OF BACT

O.A.C. §3745-31-01 defines BACT as follows:

"Best available control technology (BACT)" means an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source or major modification which the director, on a case-by-case basis, taking into account energy, environmental and economic impacts and other costs, determines is achievable for such major stationary source or major modification through application of production processes or available methods, systems and techniques, including fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant that would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61.

If the director determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof may be approved by the director instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation and shall provide for compliance by means which achieve equivalent results.

TOP-DOWN BACT PROCEDURE

As part of the permitting process, each major stationary source needs to prepare a BACT analysis in conjunction with the PSD permit application. Per U.S. EPA guidance, BACT is determined by applying a “top-down” BACT process/methodology as described in U.S. EPA’s New Source Review Workshop Manual (NSR Manual).1 This top-down process involves ranking all available control technologies in descending order of control effectiveness. Beginning with the most stringent or “top” control alternative, the analysis evaluates the technology and the benefit of reduced emissions that the technology would bring. This control alternative is established as BACT unless the analysis demonstrates technical considerations and/or energy, environmental, or economic impacts justify a conclusion that the most stringent control alternative is not achievable. In such a case, the next most stringent control alternative is evaluated.

Specifically, the NSR Manual identifies a four-step process:

Step 1 - Identify available control technologies;

Step 2 - Evaluate the technical feasibility of the control options;

Step 3 - Rank the technically feasible control technologies by control effectiveness; and

Step 4 - Evaluate most effective controls, select BACT and document results.

**BACT SUMMARY**

Section 2 through Section 11 of this BACT analysis present detailed information to support the BACT control technology and emission rates proposed for the AMPGS.

The proposed BACT emissions rates for the main boilers (B001 and B002) and the comprehensive emission control system for these units are summarized in Table 1-2 and explained in Figure 1-2.

<table>
<thead>
<tr>
<th>Air Pollutant Description of Control System</th>
<th>BACT Emission Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler Design + LNB/OFA + SCR</td>
<td>0.07 lb/mmBtu</td>
<td>30-day rolling average (CEM)</td>
</tr>
<tr>
<td><strong>Sulfur Dioxide (SO₂)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal Blend + Wet FGD</td>
<td>0.24 lb/mmBtu</td>
<td>3-hr rolling average (CEM)</td>
</tr>
<tr>
<td></td>
<td>0.184 lb/mmBtu</td>
<td>24-hr rolling average (CEM)</td>
</tr>
<tr>
<td></td>
<td>0.15 lb/mmBtu</td>
<td>30-day rolling average (CEM)</td>
</tr>
<tr>
<td><strong>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM₁₀)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baghouse + Wet FGD + Wet ESP</td>
<td>PM₁₀: 0.015 lb/mBtu (filterable)</td>
<td>3-hr average (test)</td>
</tr>
<tr>
<td></td>
<td>0.025 lb/mmBtu</td>
<td>(filterable + condensable)</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average (COM) (except for one 6-min period/hr of not more than 27 percent)</td>
</tr>
<tr>
<td></td>
<td>3-hr average</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>3-hr average (CEM)</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>3-hr average (test)</td>
</tr>
<tr>
<td>Sulfuric Acid (H₂SO₄)</td>
<td>Coal Blend + Wet FGD + Wet ESP</td>
<td>3-hr average (test)</td>
</tr>
</tbody>
</table>

Notes:

(1) LNB = Low NOₓ Burners  CEM = Continuous Emissions Monitoring
OFA = Over Fire Air        COM = Continuous Opacity Monitoring
SCR = Selective Catalytic Reduction
Wet FGD = Wet Flue Gas Desulfurization
Wet ESP = Wet Electrostatic Precipitator

(2) The BACT analysis assumes that all of the PM emissions from the pulverized coal-fired boilers are less than 10 microns in diameter.
GT Environmental, Inc.
May 2006
The proposed BACT emission rates and control methods for the natural gas-fired Auxiliary Boiler (B003) are summarized in Table 1-3. BACT for the Auxiliary Boiler is based on the exclusive use of natural gas with total fuel usage limited to an annual capacity factor of no more than 10%.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>BACT Emission Rate(1)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NOx)</td>
<td>Good Combustion Design/Operation</td>
<td>21 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>Natural Gas</td>
<td>0.09 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM10)(2)</td>
<td>Natural Gas</td>
<td>1.14 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>12.6 lb/hr(3)</td>
<td>3-hr average and ≤ 10% capacity factor</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>0.83 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H2SO4)</td>
<td>Natural Gas</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

(1) The emissions rates presented in this BACT analysis are based on the emission factors for natural gas combustion in AP-42 Section 1.4 Natural Gas Combustion (7/98): Table 1.4-1 (NOx) and Table 1.4-2 (PM/PM10, SO2 and VOC).

(2) The BACT analysis assumes that all of the PM emissions from the natural gas-fired auxiliary boiler are less than 10 microns in diameter.

(3) The BACT emission rate for CO is more restrictive than the 40 CFR Part 63 Subpart DDDDD MACT standard (i.e., 400 ppm by volume).

The proposed BACT methods for the fugitive dust emissions from the Landfill (F001), Paved Roadways (F002), Unpaved Roadways (F003), Coal Storage Piles (F004), Limestone Barge Unloading (F005) and Limestone Storage Piles (F006) are summarized in Table 1-4. BACT for these emissions units is based on the use of water and other suitable dust suppression agents and appropriate visible emission restrictions.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM)</td>
<td>Dust Suppression</td>
<td>Refer to PTI application for BACT emission rates. BACT will include appropriate VE limits.</td>
</tr>
<tr>
<td>Particulate Matter less than 10 microns in diameter (PM10)</td>
<td>Dust Suppression</td>
<td></td>
</tr>
</tbody>
</table>
The proposed BACT emission rates and control methods for the emissions from the Cooling Cells (P001 and P002) are summarized in Table 1-5. BACT for these emissions units is based on good engineering design, operation and maintenance of the mist eliminator.

<table>
<thead>
<tr>
<th>Air Pollutant Description of Control System</th>
<th>BACT Emission Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM$_{10}$) Mist Eliminator</td>
<td>0.77 tons/yr</td>
<td>PM/PM$_{10}$ emission rate for each set of cooling cells.</td>
</tr>
</tbody>
</table>

The proposed BACT emission rates and control methods for the emissions from the Fertilizer Plant (P003) are summarized in Table 1-6. BACT for these emissions units is based on the use of natural gas, good engineering design, baghouse discharge rates of no more than 0.005 grains per dry standard cubic foot (dscf) and wet scrubber discharge rates of no more than 0.04 grams per (dry standard cubic meter) dscm.

<table>
<thead>
<tr>
<th>Air Pollutant Description of Control System</th>
<th>Emission Rate$^{(2)}$</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NO$_{x}$) Good Combustion Design/Operation</td>
<td>0.86 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO$_{2}$) Natural Gas</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM$_{10}$)$^{(3)}$ Natural Gas Baghouse Scrubber</td>
<td>4.22 lb/hr</td>
<td>3-hr average</td>
</tr>
<tr>
<td>Carbon Monoxide (CO) Good Combustion Design/Operation</td>
<td>0.38 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC) Good Combustion Design/Operation</td>
<td>0.02 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H$<em>{2}$SO$</em>{4}$) Natural Gas</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

$^{(1)}$ The Fertilizer Plant is an optional emission unit that may be installed if the AMPGS is equipped with an ammonia-wet scrubber.

$^{(2)}$ The emissions rates presented in this BACT analysis are based on the emission factors for natural gas combustion in AP-42 Section 1.4 Natural Gas Combustion (7/98): Table 1.4-1 (NO$_{x}$) and Table 1.4-2 (PM/PM$_{10}$, SO$_{2}$ and VOC).

$^{(3)}$ The BACT analysis assumes that all of the PM emissions from the dryer and control devices are less than 10 microns in diameter.

The proposed BACT emission rates and control methods for the emissions from the material handling emissions units are summarized in Table 1-7. BACT for these emissions units is based on good engineering design, effective capture, baghouse discharge rates of no more than 0.005
grains per dscf, the use of water and other suitable dust suppression agents and appropriate visible emission restrictions.

Table 1-7
Summary of Proposed BACT Emission Control Strategies for Material Handling Emissions Units (P901, P902, P903, P904, P905 and P906)

<table>
<thead>
<tr>
<th>Air Pollutant Description of Control System</th>
<th>Emission Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM)</td>
<td>1.60 tons/yr</td>
<td>P901 - Coal Barge Unloading</td>
</tr>
<tr>
<td></td>
<td>9.73 tons/yr</td>
<td>P902 – Coal Crushing</td>
</tr>
<tr>
<td></td>
<td>1.22 tons/yr</td>
<td>P903 – Limestone Prep Building</td>
</tr>
<tr>
<td></td>
<td>0.33 tons/yr</td>
<td>P904 - Gypsum Conveying, etc.</td>
</tr>
<tr>
<td></td>
<td>1.50 tons/yr</td>
<td>P905 &amp; P906 - Flyash Conveying, etc.</td>
</tr>
<tr>
<td>Particulate Matter less than 10 microns in diameter (PM$_{10}$)</td>
<td>0.75 tons/yr</td>
<td>P901 - Coal Barge Unloading</td>
</tr>
<tr>
<td></td>
<td>8.94 tons/yr</td>
<td>P902 – Coal Crushing</td>
</tr>
<tr>
<td></td>
<td>1.16 tons/yr</td>
<td>P903 – Limestone Prep Building</td>
</tr>
<tr>
<td></td>
<td>0.14 tons/yr</td>
<td>P904 - Gypsum Conveying, etc.</td>
</tr>
<tr>
<td></td>
<td>1.50 tons/yr</td>
<td>P905 &amp; P906 - Flyash Conveying, etc.</td>
</tr>
</tbody>
</table>

The proposed BACT emission rates and control methods for the Diesel Engine Emergency Generating Unit (Z001) and the Diesel Engine Emergency Fire Water Pump (Z002) are summarized in Table 1-8 and Table 1-9, respectively. BACT for these engines is based on the use of low sulfur diesel fuel with an operating limit of no more than 500 hours per year.

Table 1-8
Summary of Proposed BACT Emission Control Strategies for Emergency Generator (Z001)

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Emission Rate$^{(1)}$</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NO$_x$)</td>
<td>Good Combustion Design/Operation</td>
<td>42.37 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO$_2$)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>11.26 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM$_{10}$)</td>
<td>Good Combustion Design/Operation</td>
<td>2.23 lb/hr</td>
<td>≤ 500 hours/yr</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>18.96 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>1.83 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H$_2$SO$_4$)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

1. The emissions rates presented in the permit application for the emergency generator engine are based on the emission factors in AP-42 Section 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines (10/96): Table 3.4-1 (NO$_x$, CO, SO$_2$, PM$_{10}$ and VOC).

2. The BACT analysis assumes that all of the PM emissions from the emergency diesel engines are less than 10 microns in diameter.
Table 1-9
Summary of Proposed BACT Emission Control Strategies for Emergency Fire Water Pump (Z002)

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System(1)</th>
<th>Emission Rate(1)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NOx)</td>
<td>Good Combustion Design/Operation</td>
<td>10.14 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO2)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>0.67 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and PM less than 10 microns (PM10)</td>
<td>Good Combustion Design/Operation</td>
<td>0.71 lb/hr</td>
<td>≤ 500 hours/yr</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>2.19 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>0.81 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H2SO4)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
(1) The emissions rates presented in the permit application for the fire water pump engine are based on the emission factors in AP-42 Section 3.3 Gasoline and Diesel Industrial Engines (10/96): Table 3.3-1 (NOx, CO, SO2, PM10 and VOC).
(2) The BACT analysis assumes that all of the PM emissions from the emergency diesel engines are less than 10 microns in diameter.

USE OF OTHER COAL-FIRED POWER PLANT PSD PERMITS

As set forth above, step one of a BACT analysis requires the applicant to identify available control technologies for each emissions unit. Typically, this process includes researching U.S. EPA’s RACT/BACT/LAER Clearinghouse (RBLC), which is a comprehensive summary of controls, emission limits and other information for each major source category, including coal-fired boilers. Unfortunately, the information contained in the RBLC may not be up-to-date or complete. Therefore, AMPGS also researched, collected and analyzed recently issued air permits for comparable coal-fired power plant facilities. Table 1-10 identifies five electric generating facilities that have recently obtained PSD permits that authorize the installation of pulverized coal-fired boilers comparable to the boilers proposed for AMPGS.

The five permits identified in Table 1-10 are comparable projects based on: (1) the size of the boiler(s) (the AMPGS will have two pulverized coal-fired boilers with a heat input capacity for each boiler of 5,191 mmBtu/hr); and (2) the type of coal(s) projected for use in the boiler(s) (the AMPGS will employ a variety of coal blends from both the eastern and western United States). A complete copy of each of these five PSD permits is included in Appendix A to be used as reference by Ohio EPA.

2 The permits for the five similar projects were identified from a nationwide review of other proposed pulverized coal-fired utility boiler projects (refer to the lists of pulverized coal-fired boiler projects presented in Appendix B) as well as a query of the RACT/BACT/LAER Clearinghouse (set forth in Appendix C).
Please note that each of the projects identified in Table 1-10 and AMPGS have distinguishing characteristics as well. For instance, some of these projects are coal “mine mouth” facilities that do not require coal supply flexibility.

Table 1-10
Recent Comparable PSD Permits

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>Description of Each Boiler Unit</th>
<th>Number of Units</th>
<th>Permit Number/Issue Date</th>
<th>US EPA Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prairie State Generating Company, LLC</td>
<td>7,450 mmBtu/hr 750 MW</td>
<td>2</td>
<td>Permit No. 01100065 April 28, 2005</td>
<td>Region 5</td>
</tr>
<tr>
<td>Thoroughbred Generating Company, LLC</td>
<td>7,443 mmBtu/hr 750 MW</td>
<td>2</td>
<td>Permit No. V-02-00 Rev 2 February 17, 2005(1)</td>
<td>Region 4</td>
</tr>
<tr>
<td>Longview Power Plant West Virginia</td>
<td>6,114 mmBtu/hr 600 MW</td>
<td>1</td>
<td>Permit No. R14-0024 March 2, 2004</td>
<td>Region 3</td>
</tr>
<tr>
<td>Santee Cooper Cross Generating Station(2)</td>
<td>5,700 mmBtu/hr 660 MW</td>
<td>2</td>
<td>Permit No. 0420-0030-CI February 5, 2004</td>
<td>Region 4</td>
</tr>
<tr>
<td>Elm Road Generating Facility Wisconsin</td>
<td>6,180 mmBtu/hr NA</td>
<td>2</td>
<td>Permit No. 03-RV-166 January 14, 2004</td>
<td>Region 5</td>
</tr>
</tbody>
</table>

Notes:

(1) The Commonwealth Secretary’s Findings, Conclusions of Law and Final Order (dated April 11, 2006) revised the NOx emission rate for the Thoroughbred Generating Company, LLC.

(2) The Santee Cooper Cross Generating Station netted out of PSD/BACT review for NOx, SO2 and H2SO4. The project is subject to BACT for PM/PM10, CO and VOC.
SECTION 2	MAIN BOILER BACT FOR NITROGEN OXIDES (NO\textsubscript{x})

GENERAL DESCRIPTION OF NO\textsubscript{x} FORMATION

NO\textsubscript{x} emissions are produced when fuel is burned in the presence of air at high flame temperatures (>2,000°F) and/or when burning fuel that contains nitrogen. NO\textsubscript{x} emissions are produced by every fossil fuel combustion process, including pulverized coal-fired boilers.

NO\textsubscript{x} generated by burning fuel in the presence of air at high flame temperatures is referred to as “thermal” NO\textsubscript{x}. Most thermal NO\textsubscript{x} is formed in high temperature pockets downstream of the fuel combustors where the temperature is the highest. The rate of formation of thermal NO\textsubscript{x} is a function of residence time and free oxygen and is exponential with peak flame temperature.

The NO\textsubscript{x} generated by burning fuel that contains nitrogen is referred to as “fuel” NO\textsubscript{x}. Fuel NO\textsubscript{x} results from the evolution and reaction of fuel bound nitrogen with oxygen in the combustion air.

TOP DOWN BACT PROCESS

BACT Step 1 - Identify Available Control Technologies

Several combustion control techniques exist to control thermal NO\textsubscript{x}:

- Low-NO\textsubscript{x} burners (LNB);
- Overfire Air (OFA); and
- Flue Gas Recirculation (FGR).

Other post-combustion or add-on control systems are effective to remove both fuel NO\textsubscript{x} and thermal NO\textsubscript{x} from the exhaust gas stream after it has been formed in the boiler furnace:

- Selective Catalytic Reduction (SCR); and
- Selective Non-Catalytic Reduction (SNCR).

An analysis of each control technology option is set forth in the following discussion.

Low-NO\textsubscript{x} Combustion Systems. LNB are widely used to minimize the amount of NO\textsubscript{x} generated by the combustion of pulverized coal in electric utility-sized boilers. The design of LNB limits NO\textsubscript{x} formation by controlling the burner to: (a) reduce O\textsubscript{2} in the primary combustion zone to limit the formation of fuel NO\textsubscript{x}; (b) reduce flame temperature to limit the formation of thermal NO\textsubscript{x}; and/or (c) reduce the residence time at peak temperature to limit the formation of thermal NO\textsubscript{x}. OFA reduces NO\textsubscript{x} emissions by diverting a portion of the secondary air from the lower furnace to injection ports at a higher elevation in the furnace where it is used to complete the combustion of unburned fuel leaving the burner zone.
Flue Gas Recirculation (FGR). FGR is a boiler design feature that recirculates flue gases to reduce combustion temperatures. FGR also reduces excess air requirements and thereby reduces the concentration of O$_2$ in the combustion zone which will minimize the formation of fuel NO$_x$. In order to reduce NO$_x$, the flue gases must be reintroduced into the boiler windbox.

The flue gas from combustion units has low oxygen content. The amount of oxygen available in the combustion chamber is reduced by replacing some of the oxygen rich combustion air with recirculated flue gas, thus minimizing the formation of NO$_x$. This method has been applied successfully to systems with normal burner excess air rates.

There is no information indicating that FGR can reduce the amount of NO$_x$ produced by the operation of a pulverized coal-fired boiler below the levels achieved with a LNB with OFA.

Selective Catalytic Reduction (SCR). SCR was developed to control NO$_x$ emissions from large power plant boilers and combustion turbines. SCR involves the injection of gaseous ammonia into the flue gas stream prior to a catalyst bed. The catalyst bed is generally arranged in a geometric configuration to achieve the maximum surface area for the reaction between NO$_x$ and ammonia to occur. The ammonia reacts with NO$_x$ reducing it to nitrogen (N$_2$) and water vapor.

The efficiency of the SCR system is dependent on the temperature of the flue gases entering the system within the correct temperature range. SCR systems operate at flue gas temperatures ranging from 600ºF to 800ºF.

Selective Non-Catalytic Reduction (SNCR). SNCR controls NO$_x$ emissions with the injection of gaseous ammonia or liquid urea into the flue gas stream within a temperature range of between 1,600ºF and 2,000ºF and a residence time of approximately 0.1 second. At a higher temperature, the rate of a competing reaction for the direct oxidation of NH$_3$ becomes significant. At a lower temperature, the rates of NO$_x$ reduction reactions become too slow, resulting in the release of NO$_x$ and NH$_3$ to the atmosphere. The ammonia or urea reacts with NO$_x$ reducing it to nitrogen (N$_2$). SNCR technology requires that the ammonia or urea be injected at precisely the right location in the system and within the correct temperature range.

SNCR does not reduce overall NO$_x$ emissions to rates less than can be achieved with the LNB/OFA and SCR control systems. In addition, the use of SNCR presents greater operational difficulties because of the narrow temperature range required.

BACT Step 2 - Eliminate Technically Infeasible Options

Each of the NO$_x$ control technologies identified above is technically feasible for AMPGS. However, SNCR has operating limitations that are more inflexible than SCR and will not achieve a comparable degree of NO$_x$ emission control. FGR will not enhance the minimization of NO$_x$ formation beyond what is achievable with LNB/OFA combustion controls. Therefore, SNCR and FGR are eliminated from further consideration in this BACT analysis.
BACT Step 3 - Rank Feasible Control Technologies by Control Effectiveness

- SCR: 60 to 90 percent NO\textsubscript{x} emissions reduction.
- LNB/OFA: 30 to 50 percent NO\textsubscript{x} emission.

BACT Step 4 - Evaluation and Selection of BACT

SCR constitutes the top system for NO\textsubscript{x} emissions control for a pulverized coal-fired boiler; therefore, AMPGS will utilize SCR control. In addition, as a secondary control measure, AMPGS will utilize LNB/OFA.

BACT for the AMPGS is the use of these technologies to achieve a 0.07 lb/mmBtu 30-day rolling average NO\textsubscript{x} emissions rate (equivalent to a 0.10 lb/mmBtu 3-hour average). The boilers at the AMPGS will be equipped with LNB and OFA to minimize the amount of NO\textsubscript{x} generated by the combustion of pulverized coal in the boilers to a rate of no more than 0.35 lb/mmBtu.

COMPARISON OF PROPOSED BACT WITH OTHER RECENT PSD PERMITS

Table 2-1 compares the NO\textsubscript{x} BACT proposed for the AMPGS with the NO\textsubscript{x} BACT determinations made by regulatory agencies in other recent PSD permits issued for comparable pulverized coal-fired boilers. Each of the comparable facilities will employ a LNB/OFA and SCR for NO\textsubscript{x} control. [Note: The Santee Cooper Cross Generating Station is not required to have BACT for NO\textsubscript{x} control because it netted-out of this requirement.]

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>NO\textsubscript{x} Emission Rates</th>
<th>Averaging Time</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS NO\textsubscript{x} BACT</td>
<td>Control System</td>
<td>Emission Rate</td>
<td>Time</td>
</tr>
<tr>
<td>2 x 5,191 mmBtu/hr Boilers</td>
<td>LNB/SCR</td>
<td>0.07 lb/mmBtu</td>
<td>30-day rolling</td>
</tr>
<tr>
<td>2 x 480 MW Generators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prairie State Generating Company, LLC</td>
<td>LNB/SCR</td>
<td>0.07 lb/mmBtu</td>
<td>30-day rolling</td>
</tr>
<tr>
<td>2 x 7,450 mmBtu/hr Boilers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 750 MW Generators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoroughbred Generating Company, LLC</td>
<td>LNB/SCR</td>
<td>0.07 lb/mmBtu</td>
<td>30-day rolling</td>
</tr>
<tr>
<td>2 x 7,443 mmBtu/hr Boilers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 750 MW Generators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longview Power Plant</td>
<td>LNB/SCR</td>
<td>0.08 lb/mmBtu and 489 lb/hr</td>
<td>24-hr rolling</td>
</tr>
<tr>
<td>1 x 6,114 mmBtu/hr Boiler</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 x 600 MW Generator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santee Cooper(3) Cross Generating Station</td>
<td>LNB/SCR</td>
<td>0.185 lb/mmBtu</td>
<td>30-day rolling</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2-1
Comparison of Proposed NO\textsubscript{x} BACT with Other Recent Comparable PSD Permits

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>NO\textsubscript{x} Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 5,700 mmBtu/hr Boilers 2 x 660 MW Generators</td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td></td>
<td>0.08 lb/mmBtu\textsuperscript{(4)}</td>
<td>365-day rolling</td>
</tr>
<tr>
<td>Elm Road Generating Facility 2 x 6,180 mmBtu/hr Boilers Generating Capability Unknown</td>
<td>LNB/SCR</td>
<td>0.07 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td>CEM</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

\textsuperscript{(1)} The 30-day average rate of 0.07 lb/mmBtu for the proposed AMPGS is equivalent to a 3-hr average NO\textsubscript{x} emissions rate of 0.11 lb/mmBtu. [Note: The 3-hr average emissions rate is not applicable during start-up and shutdown periods (i.e., during periods when the flue gas temperature is outside the range where the SCR system is effective).]

\textsuperscript{(2)} The Commonwealth Secretary’s Findings, Conclusions of Law and Final Order (dated April 11, 2006) reduced the NO\textsubscript{x} emission rate for the Thoroughbred Generating Company, LLC from the original permit limit of 0.08 lb/mmBtu to 0.07 lb/mmBtu on a 30-day rolling average basis.

\textsuperscript{(3)} The Santee Cooper Cross Generating Station is not subject to BACT for NO\textsubscript{x} because the facility netted out of PSD for NO\textsubscript{x}. The NO\textsubscript{x} emissions rates for the two boilers in this project were established pursuant only to other regulatory requirements.

\textsuperscript{(4)} The Santee Cooper Cross Generating Station permit includes both a 30-day rolling average and a 365-day rolling average NO\textsubscript{x} emission rate.

\textsuperscript{(5)} The 30-day rolling average for the Elm Road Generating Facility is applicable except during periods of start-up and shutdown.

COMPARISON OF PROPOSED BACT WITH OTHER APPLICABLE REGULATIONS

Table 2-2 compares the NO\textsubscript{x} BACT proposed for the AMPGS with the NO\textsubscript{x} emission limitations in other applicable regulations. As demonstrated in the table, the proposed NO\textsubscript{x} BACT is significantly more stringent than the NO\textsubscript{x} emissions limitations that range from 0.50 to 0.60 lb/mmBtu in the NSPS (40 CFR Part 60.44: Subpart Da) and the NO\textsubscript{x} emission limitation ranging from 0.40 – 0.46 lb/mmBtu in the Acid Rain regulations (40 CFR Part 76 and O.A.C. §3745-103-59) depending on boiler design.

Table 2-2
Comparison of Proposed NO\textsubscript{x} BACT with Other Applicable Requirements\textsuperscript{(1)}

<table>
<thead>
<tr>
<th>AMP Facility/ Regulation</th>
<th>Required NO\textsubscript{x} Emission Rate</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS NO\textsubscript{x} BACT</td>
<td>0.07 lb/mmBtu</td>
<td>30-day rolling</td>
<td>Equivalent to a 3-hr average NO\textsubscript{x} emissions rate of 0.11 lb/mmBtu</td>
</tr>
<tr>
<td>NSPS Subpart Da § 60.44a</td>
<td>0.50 – 0.60 lb/mmBtu</td>
<td>30-day rolling</td>
<td>0.50 – subbituminous coal 0.60 – bituminous coal</td>
</tr>
<tr>
<td>AMP Facility/Regulation</td>
<td>Required NOₓ Emission Rate</td>
<td>Averaging Time</td>
<td>Comments</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Acid Rain Part 76 § 76.7</td>
<td>0.40 – 0.46 lb/mmBtu</td>
<td>annual average</td>
<td>Depending on boiler design</td>
</tr>
<tr>
<td>OAC Rule 3745-103-59</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:

(1) OAC Chapter 3745-14 Nitrogen Oxides – Reasonably Available Control Technology (aka the “NOₓ SIP Call Rules”) and the US EPA Clean Air Interstate Rule (CAIR) both establish NOₓ allocation and trading programs. Neither of these NOₓ regulatory programs establishes specific NOₓ emissions rates in lb/mmBtu or lb/hr that are applicable to individual boilers.
SECTION 3  MAIN BOILER BACT FOR SULFUR DIOXIDE (SO₂)

GENERAL DESCRIPTION OF SO₂ FORMATION

SO₂ emissions are formed when sulfur present in the fuel oxidizes during the combustion process. Sulfur is present in coal as organic sulfur that is chemically bound in the molecular structure of the coal and pyritic sulfur where the sulfur is bound to iron compounds. Although SO₂ is the primary sulfur oxide emitted from coal combustion, the total sulfur emissions include small amounts of sulfur trioxide (SO₃) and other sulfur oxides (SOₓ).

FUEL FLEXIBILITY

BACT limits for SO₂ emissions are dependent, in large part, on the sulfur content of the fuels to be used. The summary of recent BACT determinations presented in Table 3-1 reflects this variability. The mine-mouth plants have been issued PSD permits with SO₂ emissions rates consistent with the use of BACT control technology for the sulfur content of the fuel produced by the mine. Facilities that need to acquire coal from a variety of suppliers must obtain emission limits that provide for the use of the worst case sulfur content fuel. Although blending fuels from one or more mines is possible, the worst case possible fuel must be authorized in the permit to provide the required operational flexibility and to manage long-term fuel costs.

TOP DOWN BACT PROCESS

BACT Step 1 - Identify Available Control Technologies

Post-combustion or add-on control systems remove SO₂ emissions from the exhaust gas stream after it has been formed in the boiler furnace. The post-combustion systems for SO₂ control from pulverized coal-fired boilers fall into two main categories: wet flue gas desulfurization (Wet FGD) and dry flue gas desulfurization (Dry FGD).

The demonstrated technologies for controlling SO₂ emissions from pulverized coal-fired boilers are:

- Wet FGD; and
- Dry FGD.

Wet FGD.  Wet FGD systems use an alkaline reagent to absorb SO₂ and acid gases in the flue gas. The alkaline slurry can be: (1) calcium based (consisting of lime, magnesium enhanced lime or limestone/urea) (2) sodium-based or (3) ammonia-based. Wet FGD systems are capable of achieving a SO₂ control efficiency of approximately 95 percent with little variation from one type of system to another. The lime and limestone/urea systems are typically less technically complex and easier to maintain and operate than the other reagent systems.

Wet FGD control has been demonstrated to be effective in controlling SO₂ emissions from pulverized coal-fired boilers.
**Dry FGD.** Dry FGD systems introduce calcium hydroxide slurry into a spray tower. The slurry is atomized and injected into the flue gases where the slurry droplets react with SO₂ as they evaporate in the spray tower. The resultant dry by-product is collected in the bottom of the spray dryer and in the particulate removal equipment associated with the boiler. Although Dry FGD systems have been proven effective with low-sulfur coals, Dry FGD performance with high-sulfur coals has not been as successful. In addition, the chloride content of the fuel can also impact Dry FGD performance.

**BACT Step 2 - Eliminate Technically Infeasible Options**

Each of the identified SO₂ control technologies is technically feasible.

**BACT Step 3 - Rank Feasible Control Technologies by Control Effectiveness**

- Wet FGD: 95 percent SO₂ emissions reduction.
- Dry FGD: 90 percent SO₂ emissions reduction.

**BACT Step 4 - Evaluation and Selection of BACT**

Wet FGD constitutes the top control technology for SO₂ emissions control for a pulverized coal-fired boiler. Wet FGD is superior to Dry FGD for controlling SO₂ emissions, even utilizing a variety of coals.

BACT for the proposed AMPGS is the use of Wet FGD to achieve the following SO₂ emissions rates:

- 0.24 lb/mmBtu (3-hr rolling);
- 0.184 lb/mmBtu (24-hr rolling); and
- 0.15 lb/mmBtu (30-day rolling).

These SO₂ emission rates can be reliably met using the top control technology.

**COMPARISON OF PROPOSED BACT WITH OTHER RECENT PSD PERMITS**

Table 3-1 compares the SO₂ BACT proposed for the AMPGS with the SO₂ BACT determinations contained in other recent PSD permits issued for comparable pulverized coal-fired boilers. Each of the facilities presented in this comparison table will install and operate a Wet FGD system for SO₂ emissions control. [Note: The Santee Cooper Cross Generating Station was not required to have BACT for SO₂ control because it netted out of this requirement.]
<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>SO2 Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS SO2 BACT 2 x 5,191 mmBtu/hr Boilers 2 x 480 MW Generators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note: These emission rates are based on the worst case sulfur content coal blend proposed for use at the AMPGS.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td></td>
<td>Wet FGD</td>
<td>0.24 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.184 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.15 lb/mmBtu</td>
</tr>
<tr>
<td>Prairie State Generating Company, LLC 2 x 7,450 mmBtu/hr Boilers 2 x 750 MW Generators</td>
<td>Wet FGD</td>
<td>0.182 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td>Mine Mouth Fuel Supply</td>
<td>98% control</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Per Boiler:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,126 lb/hr (months 1-24)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,450 lb/hr (after month 24)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,350 lb/hr(1)</td>
</tr>
<tr>
<td>Thoroughbred Generating Company, LLC 2 x 7,443 mmBtu/hr Boilers 2 x 750 MW Generators</td>
<td>Wet FGD</td>
<td>0.167 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.41 lb/mmBtu(2)</td>
</tr>
<tr>
<td>Longview Power Plant 1 x 6,114 mmBtu/hr Boiler 1 x 600 MW Generator</td>
<td>Wet FGD</td>
<td>0.15 lb/mmBtu and 917 lb/hr(3)</td>
</tr>
<tr>
<td></td>
<td>Mine Mouth Fuel Supply</td>
<td>0.12 lb/mmBtu and 734 lb/hr(3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.44 lb/mmBtu(5)</td>
</tr>
<tr>
<td>Santee Cooper(4) Cross Generating Station 2 x 5,700 mmBtu/hr Boilers 2 x 660 MW Generators</td>
<td>Wet FGD</td>
<td>0.25 lb/mmBtu and 95% removal efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.13 lb/mmBtu</td>
</tr>
<tr>
<td>Elm Road Generating Facility 2 x 6,180 mmBtu/hr Boilers Generating Capability Unknown</td>
<td>Wet FGD</td>
<td>0.15 lb/mmBtu and 95% removal efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.0 lb/mmBtu (uncontrolled)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Per Boiler: 1,150 lb/hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Per Boiler: 1,050 lb/hr</td>
</tr>
</tbody>
</table>

Notes:

(1) The permit requires that the Prairie State Generating Company, LLC conduct an SO2 emissions optimization study. The SO2 emission rate drops to 1,350 lb/hr for each boiler if an optimization study is not performed within 3 yrs of startup.

(2) The permit requires that the Thoroughbred Generating Company, LLC conduct an optimization study to examine the 0.41 lb/mmBtu 24-hr limit during the two year period after commencing commercial operation.
Table 3-1
Comparison of Proposed SO₂ BACT with Other Recent Comparable PSD Permits

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>SO₂ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td>(3) Longview’s BACT emission rates are different than the other projects, including AMPGS, due to the fact that Longview is a mine-mouth plant with minimal sulfur content variability in its fuel supply.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) The Santee Cooper Cross Generating Station is not subject to BACT for SO₂ because the facility netted out of PSD for SO₂. The SO₂ emissions rates for the two boilers in this project were established pursuant to other regulatory requirements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5) The permit for the Santee Cooper Cross Generating Station limits SO₂ emissions from the two new boilers (Boilers 3 &amp; 4) to no more than 0.44 lb/mmBtu when the two existing boilers (Boilers 1 &amp; 2) are not operating.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPARISON OF PROPOSED BACT WITH OTHER APPLICABLE REGULATIONS

Table 3-2 compares the SO₂ BACT emission limits for AMPGS with the SO₂ emission limitations in other applicable regulations. The proposed SO₂ BACT is significantly more stringent than the SO₂ emissions limitations that range from 0.60 to 1.2 lb/mmBtu (70% to 90% reduction) in the NSPS (40 CFR Part 60.43-Subpart Da) and O.A.C. §3745-18-59.

Table 3-2
Comparison of Proposed SO₂ BACT with Other Applicable Requirements(1)

<table>
<thead>
<tr>
<th>AMP Facility/Regulation</th>
<th>Proposed/Required SO₂ Emission Rate</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS SO₂ BACT</td>
<td>0.24 lb/mmBtu</td>
<td>3-hr rolling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.184 lb/mmBtu</td>
<td>24-hr rolling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.15 lb/mmBtu</td>
<td>30-day rolling</td>
<td></td>
</tr>
<tr>
<td>Note: These emission rates are based on the worst case sulfur content coal blend proposed for use at the AMPGS.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSPS Subpart Da § 60.43a</td>
<td>0.6 – 1.2 lb/mmBtu</td>
<td>30-day rolling</td>
<td></td>
</tr>
<tr>
<td>OAC rule 3745-18-59(A)</td>
<td>4.5 lb/mmBtu</td>
<td>3-hr or monthly composite coal sampling</td>
<td></td>
</tr>
</tbody>
</table>

Note:

(1) OAC §3745-103 (Acid Rain Permits and Compliance), the CAA Title IV Acid Rain Control program and the US EPA Clean Air Interstate Rule (CAIR) establish SO₂ allocation and trading programs that the proposed AMPGS will participate in. None of the other applicable SO₂ regulatory programs establish specific SO₂ emissions rates in lb/mmBtu or lb/hr that are applicable to individual boilers.
SECTION 4

MAIN BOILER BACT FOR
PARTICULATE MATTER (PM$_{10}$)

GENERAL DESCRIPTION OF PM$_{10}$ FORMATION

Coal combustion results in emissions of particulate matter (PM) and particulate matter less than ten microns in diameter (PM$_{10}$). PM and PM$_{10}$ in the flue gases appears in both “filterable” and “condensable” forms. Filterable particulate matter is solid materials that can be captured by a high efficiency baghouse. Condensable particulate matter is comprised of gaseous pollutants that may pass through a baghouse and become PM and PM$_{10}$ when cooled.

ISSUES PERTAINING TO PM$_{10}$ BACT

Historically, the emission limitations regulations applicable to coal-fired power plants only applied to the “filterable” component of the total PM emissions. This is the case with Ohio’s State Implementation Plan and O.A.C. §3745-17-10. It is also the case with the federal NSPS, 40 CFR Part 60 Subpart Da. Recent decisions from U.S. EPA indicate that new major sources should consider total PM$_{10}$ emissions, including both the filterable and condensable forms. In addition, the air quality modeling specifications for proposed new major sources include language stating that the air quality impact analysis should be based on the total PM$_{10}$ emissions, including both filterable and condensable forms. Thus, the BACT analysis for the AMPGS includes an evaluation of both filterable and condensable PM$_{10}$.

Predicting the filterable PM$_{10}$ emission rate from a pulverized coal-fired boiler can be done with considerable accuracy as there is long-standing data and information available for filterable PM$_{10}$. In contrast, predicting the condensable PM$_{10}$ emission rate is much more difficult given: (a) the variables, such as sulfur content in a coal supply, that could impact the amount of condensable particulates; and (b) the lack of performance test data. As noted above, historically, regulatory agencies did not require condensable PM emissions to be evaluated.

The available stack tests methods for particulate emissions measurement, U.S. EPA Method 5 (PM), Method 17 (PM), Method 201 (PM$_{10}$) and Method 201A (PM$_{10}$), measure a particulate emission rate based only on the filterable portion of the sampling train (the “front half”). Although the condensable portion of the sampling train (the “back half”) also can be collected pursuant to these methods, test results seldom report and analyze the back half results to determine the specific constituents of the condensable portion of the total PM$_{10}$ emissions.

U.S. EPA Method 202 is the formal test method for establishing the condensable portion of total PM$_{10}$ emissions. U.S. EPA recommends nitrogen purging of the impinger solution to remove dissolved or oxidized SO$_2$ from the condensable PM$_{10}$ measured by Method 202. There is concern, however, that SO$_2$ may create a bias in the Method 202 results.

The concerns with the accuracy of Method 202 measurements and the uncertainty associated with predicting actual condensable PM$_{10}$ emission rates has caused recent applicants for PSD permits for major coal-fired power plants to request relatively high total PM$_{10}$ (filterable + condensable) emission rates. Two examples of PSD permits that specify significant differences
between the filterable and total (filterable + condensable) PM$_{10}$ emission rates are the permits issued by Illinois EPA to the Prairie State Generating Company, LLC in April 2005 and by Kentucky Department for the Environmental Protection to the Thoroughbred Generating Company LLC in February 2005. The PM$_{10}$ emission limitations for both of these permits are presented in Table 4-1.

**TOP DOWN BACT PROCESS**

**BACT Step 1 - Identify Available Control Technologies**

The design of modern pulverized coal-fired boilers maximizes the efficiency of combustion and thereby inherently minimizes the uncontrolled rate of PM$_{10}$ emissions. This is accomplished through the proper design and operation of the combustion air delivery systems.

The post-combustion or add-on control systems used to remove PM$_{10}$ from flue gases produced by pulverized coal-fired boilers include: fabric filters (baghouses) and dry and wet electrostatic precipitators (ESPs). [Note: Although Wet FGD systems are employed for SO$_2$ emissions control, it is possible that wet FGD will also control some of the components of the condensable PM$_{10}$ emissions. This is reflected in the PSD permit issued for the Elm Road Generating Facility that identifies FGD as one of the components of the overall PM/PM$_{10}$ control system for that facility. Although Wet FGD is not specifically listed as a PM$_{10}$ emission control technology in this analysis, the proposed BACT emission rates for the AMPGS do reflect the use of a Wet FGD control system.]

The demonstrated technologies for controlling PM$_{10}$ emissions from pulverized coal-fired boilers are:

- Baghouse (fabric filter dust collector);
- Dry Electrostatic Precipitators (Dry ESP); and
- Wet Electrostatic Precipitators (Wet ESP).

**Baghouse (Fabric Filter) Control Systems.** Baghouses have been widely used on coal combustion sources. The typical baghouse consists of multiple fabric filters (bags) arrayed in a shell structure with a bag cleaning system and dust hoppers. Particulate-laden flue gases enter the baghouse and pass through a filter bag from the outside of the bag toward the inside. This causes particulate matter in the flue gas to be collected on the fabric by sieving. The captured/collected particulate forms a layer on the outside surface of the bag. The collection efficiency of the Baghouse can increase as the thickness of this dust cake increases. The bags are periodically cleaned to remove the layer of captured particulate matter which is deposited into the dust hoppers at the base of the Baghouse. The dust hoppers are evacuated periodically.

The capture efficiency for dry particles is well-proven with a Baghouse, and is typically in the range of approximately 99.5 percent capture for the dry particles. However, a Baghouse is not
expected to produce the same capture efficiency for the condensable fraction of the total amount of particulate matter produced by pulverized coal combustion.

**Dry ESP.** A Dry ESP is a control device that uses electrical properties to move particles that are entrained in flue gases onto collector plates. The particles are given a negative electrical charge when they pass through a “corona” created by high voltage electrodes in the center of the flow. The negatively charged particles are attracted to positively charged collector plates. In Dry ESPs, the collectors are “rapped” to dislodge the particulates which slide down the collector plates into dust hoppers. The dust hoppers are evacuated periodically.

Technical information indicates that a Dry ESP can not reduce PM$_{10}$ emissions below the levels achieved with a baghouse. And, it is possible that a Dry ESP will be less effective than a baghouse for certain coal blends because of increased resistivity of the particles in the fly ash resulting from the combustion of low-sulfur coals.

**Wet ESP.** The design and operation of a Wet ESP is similar to a Dry ESP. A Wet ESP also uses electrical properties to move particles that are entrained in flue gases onto collector plates. The particles are given a negative electrical charge when they pass through a “corona” created by high voltage electrodes in the center of the flow. The negatively charged particles are attracted to positively charged collector plates. In Wet ESPs, the collectors are washed rather than rapped. The wash water flows with the collected particles into a sump. Some of the water may be recycled for use by the Wet ESP. The remaining water is transported to a settling pond or de-watering system.

Wet ESPs are capable of effectively controlling very small particles. The humidity in a Wet ESP causes the system to collect higher resistivity particles, which makes a Wet ESP more efficient than a Dry ESP with lower-sulfur coals. Wet ESPs also collect liquid particles/aerosols. The washing system in a Wet ESP eliminates the re-entrainment of particles that can occur during the rapping of the plates in a Dry ESP.

**BACT Step 2 - Eliminate Technically Infeasible Options**

Although each of the identified PM$_{10}$ control technologies is technically feasible for the AMPGS, each technology has limitations that should be considered when selecting BACT for total PM$_{10}$ control. Because a variety of coals with different ash resistivity may be employed, it is likely that a baghouse will perform better than a Dry ESP in capturing filterable PM$_{10}$. Likewise, neither a baghouse nor a Dry ESP will be as effective as a Wet ESP to control condensable PM$_{10}$.

**BACT Step 3 - Rank Feasible Control Technologies by Control Effectiveness**

- **Baghouse:** 99+ percent filterable PM$_{10}$ emission reductions and capable of achieving a 0.015 lb/MMBtu 3-hour average emission rate for filterable particles.
- **Dry ESP:** 99+ percent filterable PM$_{10}$ emission reductions and capable of achieving a 0.015 lb/MMBtu 3-hour average emission rate for filterable particles.
• Wet ESP: 99+ percent filterable PM$_{10}$ emission reductions and capable of achieving a 0.025 lb/MMBtu 3-hour average emission rate for total PM$_{10}$ (filterable + condensable particles) when used in combination with a baghouse.

**BACT Step 4 - Evaluation and Selection of BACT**

The BACT control system selected for the AMPGS is proper boiler design and a Baghouse augmented with the use of a Wet ESP to remove a high percentage of the total PM$_{10}$ (filterable + condensable). The BACT control system will achieve a rate of no more than 0.015 lb/mmBtu filterable PM$_{10}$ and a rate of no more than 0.025 lb/mmBtu total (filterable + condensable) PM$_{10}$. The Baghouse plus Wet ESP control system constitutes the top system for total PM$_{10}$ emission control for a pulverized coal-fired boiler.

Although the use of a Dry ESP can produce filterable reductions comparable to a Baghouse, the Dry ESP has not been proven to control as well as a Baghouse using a variety of coals and differing ash resitivities. As a result, Dry ESP technology is inferior to the use of Baghouse technology for the AMPGS.

The proposed 0.015 lb/mmBtu filterable PM$_{10}$ emissions rate (3-hour average as demonstrated by stack testing) can be reliably met using the proposed technology. In addition, the actual total (filterable + condensable) PM$_{10}$ emission rate of 0.025 lb/mmBtu proposed is appropriate given the lack of historic condensable data gathered and based on PSD permit limits for similar projects.

**COMPARISON OF PROPOSED BACT WITH OTHER RECENT PSD PERMITS**

Table 4-1 compares the PM$_{10}$ BACT proposed for the AMPGS with the PM$_{10}$ BACT determinations set in other recent PSD permits issued for comparable pulverized coal-fired boilers.

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>PM$_{10}$ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS PM$_{10}$ BACT 2 x 5,191 mmBtu/hr Boilers 2 x 480 MW Generators</td>
<td>Proper Boiler Design, Pulsejet Baghouse and Wet ESP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM$_{10}$: 0.015 lb/mmBtu (filterable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM$_{10}$: 0.025 lb/mmBtu (filterable + condensable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 percent opacity</td>
</tr>
<tr>
<td>Prairie State Generating Company, LLC</td>
<td>Dry ESP</td>
<td>PM: 0.015 lb/mmBtu$^{(1)}$ (filterable)</td>
</tr>
</tbody>
</table>

$^{(1)}$ Initial PM and PM$_{10}$ tests and
### Table 4-1
**Comparison of Proposed PM\textsubscript{10} BACT with Other Recent Comparable PSD Permits**

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>PM\textsubscript{10} Emission Rates</th>
<th>Averaging Time</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 7,450 mmBtu/hr Boilers 2 x 750 MW Generators</td>
<td>PM\textsubscript{10}: 0.035 lb/mmBtu\textsuperscript{(1)} (filterable + condensable)</td>
<td>3-hr block</td>
<td>repeat tests every 30 months.</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average, except for one 6-min period/hr of not more than 27 percent</td>
<td>COM</td>
</tr>
<tr>
<td>Thoroughbred Generating Company, LLC 2 x 7,443 mmBtu/hr Boilers 2 x 750 MW Generators</td>
<td>PE: 0.018 lb/mmBtu\textsuperscript{(2)}</td>
<td>3-hr</td>
<td>Initial PE test and repeat test annually.\textsuperscript{(2)}</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average, except for one 6-min period/hr of not more than 27 percent</td>
<td>COM</td>
</tr>
<tr>
<td>Longview Power Plant 1 x 6,114 mmBtu/hr Boiler 1 x 600 MW Generator</td>
<td>PM: 0.018 lb/mmBtu and 110 lb/hr (filterable)</td>
<td>6-hr rolling</td>
<td>CEM</td>
</tr>
<tr>
<td></td>
<td>PM\textsubscript{10}: 0.018 lb/mmBtu and 110 lb/hr (filterable + condensable)</td>
<td>6-hr rolling</td>
<td>Initial test and repeat test every 3 years.</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average, except for one 6-min period/hr of not more than 27 percent</td>
<td>COM</td>
</tr>
<tr>
<td>Santee Cooper Cross Generating Station 2 x 5,700 mmBtu/hr Boilers 2 x 660 MW Generators</td>
<td>PM: 0.03 lb/mmBtu (filterable)</td>
<td>3-hr</td>
<td>Initial test and repeat test annually.</td>
</tr>
<tr>
<td></td>
<td>PM: 0.015 lb/mmBtu (filterable)</td>
<td>30-day rolling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PM\textsubscript{10}: 0.018 lb/mmBtu (filterable + condensable)</td>
<td>3-hr</td>
<td>Initial test.</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average, except for one 6-min period/hr of not more than 27 percent</td>
<td>COM</td>
</tr>
<tr>
<td>Elm Road Generating Facility 2 x 6,180 mmBtu/hr Boilers Generating Capability Unknown</td>
<td>Fabric Filter/FGD/Wet ESP</td>
<td>PM\textsubscript{10}: 0.018 lb/mmBtu (filterable + condensable)</td>
<td>3-hr</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity</td>
<td>6-min average, except for one 6-min period/hr of not more than 27 percent</td>
<td>COM</td>
</tr>
</tbody>
</table>
### Table 4-1
Comparison of Proposed PM$_{10}$ BACT with Other Recent Comparable PSD Permits

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>PM$_{10}$ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
</tbody>
</table>

**Notes:**

1. The emission rates for the Prairie State Generating, LLC exclude periods of start-up, shutdown and malfunctions. The PM$_{10}$ (filterable + condensable) emission limit could be reduced pending the results of stack testing.

2. The emission limitation in the Thoroughbred Generating Company, LLC (refer to Section B, paragraph 2.a.) is “particulate emissions shall not exceed 0.018 lb/mmBtu heat input from each unit based on a three-hour average.” The testing provisions require emissions testing “for compliance with the emission standard for PM/PM$_{10}$ (filterable)” (refer to Section D, paragraph 2) and emissions testing “for compliance with the BACT emission standard for PM$_{10}$ (condensable)” (refer to Section D, paragraph 3). The permit does not specify any PM or PM$_{10}$ emission limitation in terms of filterable or condensable emissions.

### COMPARISON OF PROPOSED BACT WITH OTHER APPLICABLE REGULATIONS

Table 4-2 compares the proposed PM$_{10}$ BACT emission limits for the AMPGS with the PM$_{10}$ emission limitations in other applicable regulations. The filterable PM$_{10}$ and the total (filterable + condensable) PM$_{10}$ BACT are significantly more stringent than the filterable PM emission limitations of 0.07 lb/mmBtu in the NSPS (40 CFR 60-Subpart Da) and 0.10 lb/mmBtu in O.A.C. §3745-17-10.

### Table 4-2
Comparison of Proposed PM$_{10}$ BACT with Other Applicable Requirements

<table>
<thead>
<tr>
<th>AMP Facility/Regulation</th>
<th>Proposed/Required PM$_{10}$ Emission Rate</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS PM$_{10}$ BACT</td>
<td>0.015 lb/mmBtu (filterable)</td>
<td>3-hr</td>
<td>Stack Test</td>
</tr>
<tr>
<td></td>
<td>0.025 lb/mmBtu (filterable + condensable)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 percent opacity (except for one 6-min period/hr of not more than 60 percent)</td>
<td>6-min</td>
<td>COM</td>
</tr>
<tr>
<td>NSPS Subpart Da § 60.42a</td>
<td>PM = 0.07 lb/mmBtu (filterable)</td>
<td>3-hr</td>
<td>Compliance determined by US EPA Method 5 (filterable only).</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity (except for one 6-min period/hr of not more than 27 percent)</td>
<td>6-min</td>
<td>Compliance determined by US EPA Method 9.</td>
</tr>
<tr>
<td>OAC rule 3745-17-10</td>
<td>PM = 0.10 lb/mmBtu (filterable)</td>
<td>3-hr</td>
<td>Compliance determined by US EPA Method 5 (filterable only).</td>
</tr>
<tr>
<td></td>
<td>20 percent opacity (except for one 6-min period/hr of not more than 60 percent)</td>
<td>6-min</td>
<td>Compliance determined by US EPA Method 9 or COM.</td>
</tr>
</tbody>
</table>
Table 4-2
Comparison of Proposed PM$_{10}$ BACT with Other Applicable Requirements

<table>
<thead>
<tr>
<th>AMP Facility/ Regulation</th>
<th>Proposed/Required PM$_{10}$ Emission Rate</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
</table>

Note:

(1) OAC rule 3745-17-07 includes the following exemptions from this opacity limit: (a) when the presence of uncombined water is the only reason for failure to meet the opacity limit; (b) periods of start-up and shutdown when the flue gases are less than 250°F at the inlet to an ESP or baghouse; and (c) increased coal firing from a banked condition for a period not to exceed 30 minutes.
GENERAL DESCRIPTION OF CO AND VOC FORMATION

CO and VOC emissions are produced due to incomplete combustion (i.e., too little oxygen for the amount of fuel combusted, too much oxygen thus cooling the flame, flame impingement against a cold surface, or poor fuel/air mixing). The amount of CO produced from fuel combustion sources is inversely related to the NOx emission rate. In typical combustion units, CO emissions are high when NOx emissions are low and vice versa.

Since the same available control technology controls both CO and VOC emissions, these pollutants have been grouped for BACT proposes.

TOP DOWN BACT PROCESS

BACT Step 1 - Identify Available Control Technologies

The design of modern pulverized coal-fired boilers maximizes the efficiency of combustion and thereby minimizes the uncontrolled rate of both CO and VOC emissions. This is accomplished through the proper design and operation of the combustion air delivery systems.

The possible technologies for controlling CO and VOC emissions are:

- Thermal Oxidation;
- Catalytic Oxidation; and
- Good combustion design and operation.

In addition to the control choices listed, it is possible that the Wet ESP system employed for PM10 emissions control could also control a small amount of the VOC emitted from a pulverized coal-fired boiler. Also, the combustion features of the LNB/OFA systems used to minimize NOx emissions will also serve to obtain the complete combustion necessary to minimize CO and VOC emissions.

Thermal Oxidation. Thermal oxidation converts CO and VOC to carbon dioxide (CO2) and water vapor (H2O). This is accomplished by passing the contaminated exhaust gas through a high temperature burner flame zone to combust carbon compounds. Time, temperature and turbulence will impact the efficiency of this combustion process. The amount of time the flue gases are treated in a thermal incinerator can decrease with higher temperature and greater turbulence. Likewise, residence time must be increased if the temperature is lowered. Thermal oxidation control systems are typically employed for CO and/or VOC emission control when there is a relatively high concentration of contaminants and a relatively low flow rate. Thermal oxidizers are generally not recommended for use when the flue gases include sulfur compounds or other contaminants that result in the formation of corrosive acid gases.
**Catalytic Oxidation.** Oxidation catalysts systems are a post-combustion method for removing CO emissions from the boiler exhaust gas. Oxidation catalyst technology does not require the introduction of additional chemicals for the reaction. The oxidation of CO to CO$_2$ uses the excess air present in the boiler exhaust. CO catalytic oxidation reactors operate in a relatively narrow temperature range of 700-1,100°F. At lower temperatures, CO conversion efficiency decreases and at higher temperatures damage to the catalyst may occur. The factors relating to this technology include the catalyst reactor design, optimal operating temperature, back-pressure loss to the system, catalyst life, and potential increases in PM$_{10}$ emissions.

**Good Combustion Design and Operation.** CO and VOC emissions result from incomplete combustion of the carbon in fuels. Modern boiler design and good combustion practices (GCP) will ensure the turbulence and O$_2$ necessary for complete combustion and conversion of CO and VOC to CO$_2$ and H$_2$O vapor. GCP includes operating at a sufficiently high combustion temperature, adequate residence time and adequate excess air and turbulence.

**BACT Step 2 - Eliminate Technically Infeasible Options**

Thermal oxidation and catalytic oxidation are not technically feasible for controlling CO and/or VOC emissions from a pulverized coal-fired power plant because of the power plant’s extremely large air volume and relatively dilute concentrations in the flue gases. Under such circumstances, acid gases will adversely impact the capability of the control system by poisoning the catalysts. In addition, the use of either thermal oxidation or catalytic oxidation will increase emissions of other air contaminants. As a result, both thermal oxidation and catalytic oxidation are excluded from this BACT analysis.

**BACT Step 3 - Rank Feasible Control Technologies by Control Effectiveness**

- Good Combustion Design and Operation – minimize CO and VOC emissions.

**BACT Step 4 - Evaluation and Selection of BACT**

The only control measure demonstrated to be effective for minimizing CO and VOC emissions from a pulverized coal-fired boiler is the use of good combustion practices. The proposed BACT for the AMPGS is the use of good combustion practices to achieve a 3-hour average CO emission rate of 0.154 lb/mmBtu, and a 3-hour average VOC emission rate of 0.0037 lb/mmBtu.

**COMPARISON OF PROPOSED BACT WITH OTHER RECENT PSD PERMITS**

**CO.** Table 5-1 compares the CO BACT proposed for the AMPGS with the CO BACT determinations in other recent PSD permits issued for comparable pulverized coal-fired boilers. Each of the permits requires the use of Good Combustion Practices for CO control.
VOC. Table 5-1 compares the VOC BACT proposed for the AMPGS with the VOC BACT determinations in other recent PSD permits issued for comparable pulverized coal-fired boilers. Each of the permits for the other facilities requires the use of Good Combustion Practices for VOC control. In fact, the use of Good Combustion Practices was approved as the Lowest Achievable Emission Rate (LAER) technology for the Elm Road Generating Facility (January 14, 2004).

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>PM$_{10}$ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td>AMPGS CO and VOC BACT</td>
<td>Good Combustion Design and Operation</td>
<td>CO: 0.154 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC: 0.0037 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CO: 0.12 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CO: 893 lb/hr during startup and shutdown</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOM$^{(1)}$: 0.004 lb/mmBtu</td>
</tr>
<tr>
<td>Prairie State Generating Company, LLC</td>
<td>Good Combustion Practices</td>
<td>CO: 0.10 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC: 0.0072 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CO: 0.11 lb/mmBtu and 673 lb/hr</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC: 0.004 lb/mmBtu and 24.5 lb/hr</td>
</tr>
<tr>
<td></td>
<td>No Technology Specified</td>
<td>CO: 0.16 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC: 0.0024 lb/mmBtu</td>
</tr>
<tr>
<td>Santee Cooper Cross Generating Station</td>
<td>Good Combustion Practices</td>
<td>CO: 0.12 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC: 0.0035 lb/mmBtu$^{(2)}$</td>
</tr>
</tbody>
</table>

Notes:

$^{(1)}$ The Prairie State Generating Company, LLC permit limits volatile organic material (VOM) emissions rather than volatile organic compound (VOC) emissions. The permit specifies that either Method 18 or Method 25A can be used for testing and that methane, ethane and other exempt compounds can be excluded. This language suggests that the term VOM = VOC.

$^{(2)}$ The VOC emission limit in the permit for the Elm Road Generating Facility is based on Lowest Achievable Emission Rate (LAER) rather than BACT.
COMPARISON OF PROPOSED BACT WITH OTHER APPLICABLE REGULATIONS

Table 5-2 compares the BACT emission limits proposed for CO of 0.154 lb/mmBtu and VOC of 0.0037 lb/mmBtu for the AMPGS with the CO and VOC emission limitations in other applicable regulations.

<table>
<thead>
<tr>
<th>AMP Facility/ Regulation</th>
<th>Proposed/Required CO and VOC Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS CO and VOC BACT</td>
<td>CO: 0.154 lb/mmBtu</td>
<td>3-hr</td>
<td>CEM</td>
</tr>
<tr>
<td></td>
<td>VOC: 0.0037 lb/mmBtu</td>
<td>3-hr</td>
<td>Stack Test</td>
</tr>
<tr>
<td>NSPS Subpart Da</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>O.A.C. §3745-21-08</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td>This rule requires the best available control techniques and operating practices to minimize CO emissions.</td>
</tr>
</tbody>
</table>
SECTION 6  MAIN BOILER BACT FOR SULFURIC ACID MIST (H$_2$SO$_4$)

GENERAL DESCRIPTION OF H$_2$SO$_4$ FORMATION

SO$_2$ can oxidize to form sulfur trioxide (SO$_3$) at the high temperatures that are present in a pulverized coal-fired boiler. Approximately 0.5 to 2% of the SO$_2$ present in the flue gases converts to SO$_3$. The SO$_3$ can then condense and combine with water to form sulfuric acid (H$_2$SO$_4$). The formation of H$_2$SO$_4$ can occur in the flue gases prior to the discharge of emissions from the stack.

Coal-fired power plants that are equipped with Selective Catalytic Reduction (SCR) for nitrogen oxides (NO$_x$) emission control have increased rates of H$_2$SO$_4$ emissions because the SCR catalysts promotes SO$_3$ formation. Likewise, units equipped with Wet FGD controls experience greater H$_2$SO$_4$ emission rates due to the rapid cooling of the exhaust gases in the presence of water.

The actual rates of conversion of SO$_2$ to SO$_3$ and then to H$_2$SO$_4$ are difficult to predict with a high degree of accuracy. This is because the reactions are dependent on the characteristics of the coal being burned and the operating parameters of the control systems employed.

TOP DOWN BACT PROCESS

BACT Step 1 - Identify Available Control Technologies

The technologies for controlling H$_2$SO$_4$ emissions from pulverized coal-fired boilers are:

- Dry Sorbent Injection (DSI); and
- Wet ESP.

**Dry Sorbent Injection (DSI).** DSI involves: (1) the addition of a dry alkaline material in the boiler flue gases, (2) an expansion or reaction chamber to provide for uniform distribution of the sorbent material, (3) an increase residence/reaction time and (4) a baghouse after the DSI unit to remove the reaction byproducts and excess sorbent. DSI systems are typically more efficient in removing acid gases for lower sulfur content coals.

**Wet ESPs.** A Wet ESP uses electrical properties to move particles that are entrained in flue gases onto collector plates. Wet ESPs also collect liquid particles or aerosols. The particles are given a negative electrical charge when they pass through a “corona” created by high voltage electrodes in the center of the flow. The negatively charged particles are attracted to positively charged collector plates. In Wet ESPs the collectors are washed rather than “rapped”. The wash water flows with the collected particles into a sump. Some of the water may be recycled for use in the operation of the Wet ESP.

Wet ESPs are capable of achieving very high control efficiencies for very small particles. The humidity in a Wet ESP causes the system to collect higher resistivity particles which makes a
Wet ESP highly efficient with a range of sulfur content coals. The washing system in a Wet ESP eliminates the re-entrainment of particles that can occur during the “rapping” of the plates in a Dry ESP.

**BACT Step 2 - Eliminate Technically Infeasible Options**

Both of the identified H$_2$SO$_4$ control technologies are technically feasible for the AMPGS.

**BACT Step 3 - Rank Feasible Control Technologies by Control Effectiveness**

- Wet ESP: 90 percent H$_2$SO$_4$ emission reductions.
- DSI: up to 90 percent H$_2$SO$_4$ emission reductions if burning low sulfur coals.

**BACT Step 4 - Evaluation and Selection of BACT**

A Wet ESP is the best control technology demonstrated to be effective in minimizing H$_2$SO$_4$ emissions from a pulverized coal-fired boiler with a variety of coals. DSI is eliminated from this BACT analysis because this technology would not be as consistently reliable as a Wet ESP with the range of sulfur content in the fuels that may be employed.

The proposed BACT for the AMPGS is the use of a Wet ESP to achieve a 3-hour average H$_2$SO$_4$ emission rate of 0.0075 lb/mmBtu (this rate is consistent with the use of an SCR for NO$x$ emission control and the use of coals that result in no more than 0.15 lb/mmBtu of SO$_2$ emissions on a 30-day rolling average basis after control by a Wet FGD).

**COMPARISON OF PROPOSED BACT WITH OTHER RECENT PSD PERMITS**

Table 6-1 compares the H$_2$SO$_4$ BACT proposed for the AMPGS with the H$_2$SO$_4$ BACT determinations in other recent PSD permits issued for comparable pulverized coal-fired boilers. Each of the other facilities required to employ BACT will utilize either a Wet ESP or DSI for H$_2$SO$_4$ control. Note: The Santee Cooper Cross Generating Station (February 5, 2004) was not required to have BACT for H$_2$SO$_4$ control because it netted out of this requirement.

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>H$_2$SO$_4$ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMPGS H$_2$SO$_4$ BACT 2 x 5,191 mmBtu/hr Boilers 2 x 480 MW Generators</td>
<td>Wet ESP 0.0075 lb/mmBtu 3-hr</td>
<td>Method 8 Stack Test</td>
</tr>
</tbody>
</table>

*Note: These emission rates are based on the worst case sulfur content coal blend proposed for use at the AMP facility.*
### Table 6-1
Comparison of Proposed H$_2$SO$_4$ BACT with Other Recent Comparable PSD Permits

<table>
<thead>
<tr>
<th>Pulverized Coal-Fired Power Plant Project</th>
<th>H$_2$SO$_4$ Emission Rates</th>
<th>Compliance Method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control System</td>
<td>Emission Rate</td>
</tr>
<tr>
<td>Prairie State Generating Company, LLC</td>
<td>Wet ESP</td>
<td>0.005 lb/mmBtu$^{(1)}$</td>
</tr>
<tr>
<td>2 x 7,450 mmBtu/hr Boilers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 750 MW Generators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thoroughbred Generating Company, LLC</td>
<td>Wet ESP</td>
<td>0.00497 lb/mmBtu</td>
</tr>
<tr>
<td>2 x 7,443 mmBtu/hr Boilers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 750 MW Generators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Longview Power Plant</td>
<td>Dry Sorbent Injection</td>
<td>0.0075 lb/mmBtu</td>
</tr>
<tr>
<td>1 x 6,114 mmBtu/hr Boiler</td>
<td>w/Fabric Filter</td>
<td>and 45.8 lb/hr</td>
</tr>
<tr>
<td>1 x 600 MW Generator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santee Cooper 3rd Cross Generating Station</td>
<td>No Technology Specified</td>
<td>0.0014 lb/mmBtu</td>
</tr>
<tr>
<td>2 x 5,700 mmBtu/hr Boilers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 x 660 MW Generators</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elm Road Generating Facility</td>
<td>FGD and Wet ESP</td>
<td>0.010 lb/mmBtu</td>
</tr>
<tr>
<td>2 x 6,180 mmBtu/hr Boilers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Generating Capability Unknown</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

1. The Prairie State Generating Company, LLC permit excludes periods of startup and shutdown from the H$_2$SO$_4$ emission limitation.

2. The Prairie State Generating Company, LLC permit specifies the use of Method 8 and notes that the H$_2$SO$_4$ emissions determined by this method are excluded from the condensable PM$_{10}$ emission rate determined by Method 202.

3. The Santee Cooper Cross Generating Station is not subject to BACT for H$_2$SO$_4$ because the facility netted out of PSD for H$_2$SO$_4$. The H$_2$SO$_4$ emissions rates for the two boilers in this project were established pursuant to other regulatory requirements.

**COMPARISON OF PROPOSED BACT WITH OTHER APPLICABLE REGULATIONS**

There are no other applicable requirements that limit emissions of H$_2$SO$_4$ from pulverized coal-fired boilers.
SECTION 7  AUXILIARY BOILER BACT

The Auxiliary Boiler (B003) at the AMPGS is a natural gas-fired unit with a design heat input rating of 150 mmBtu/hr. The Auxiliary Boiler will be used on an intermittent basis during those exceptional periods when neither of the main boilers (B001 and B002) is operating. The maximum annual capacity factor\(^3\) for the Auxiliary Boiler will be less than 10 percent.

**BACT**

The Auxiliary Boiler (B003) is subject to BACT for the same air pollutants as the two main boilers (B001 and B002) \((i.e., NO_x, SO_2, PM/PM_{10}, CO, VOC and H_2SO_4)\). BACT for this unit is determined by the following:

- Use of pipeline natural gas;
- Good combustion design and operation;
- Restriction on annual fuel usage to a capacity factor of less than 10%;
- Compliance with the applicable provisions of the 40 CFR Part 60 Subpart Db NSPS for Industrial-Commercial-Institutional Steam Generating Units; and
- Compliance with the applicable provisions for limited use gaseous fuel subcategory\(^4\) boilers in the 40 CFR Part 63 Subpart DDDDD MACT standards for Industrial-Commercial-Institutional Boilers and Process Heaters.

The BACT emission rates for the Auxiliary Boiler at the AMPGS are summarized in Table 7-1.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>BACT Emission Rate(^{(1)})</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NO(_x))</td>
<td>Good Combustion Design/Operation</td>
<td>21 lb/hr</td>
<td>3-hr average and ≤ 10% capacity factor</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO(_2))</td>
<td>Natural Gas</td>
<td>0.09 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM(_{10}))(^{(2)})</td>
<td>Natural Gas</td>
<td>1.14 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>12.6 lb/hr(^{(3)})</td>
<td></td>
</tr>
</tbody>
</table>

\(^3\) 40 CFR Part 60 Subpart Db and 40 CFR Part 63 Subpart DDDDD define the term *annual capacity factor* as the ratio between the actual heat input to a steam generating unit and the potential heat input to the steam generating unit had it been operated for 8,760 hours during a calendar year.

\(^4\) 40 CFR Part 63 Subpart DDDDD § 63.7575 defines *limited use gaseous fuel subcategory* to include any watertube boiler that burns exclusively gaseous fuels with a rated capacity of 10 mmBtu/hr or greater and has a federally enforceable annual capacity factor of less than 10 percent.
### Volatile Organic Compounds (VOC)

<table>
<thead>
<tr>
<th></th>
<th>Good Combustion Design/Operation</th>
<th>0.83 lb/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid (H₂SO₄)</td>
<td>Natural Gas</td>
<td>Negligible</td>
</tr>
</tbody>
</table>

Notes:

1. The emissions rates presented in this BACT analysis are based on the emission factors for natural gas combustion in AP-42 Section 1.4 Natural Gas Combustion (7/98): Table 1.4-1 (NOₓ) and Table 1.4-2 (PM/PM₁₀, SO₂ and VOC).

2. The BACT analysis assumes that all of the PM emissions from the natural gas-fired auxiliary boiler are less than 10 microns in diameter.

3. The BACT emission rate for CO is more restrictive than the 40 CFR Part 63 Subpart DDDDD MACT standard (i.e., 400 ppm by volume).

### COMPARISON OF PROPOSED BACT WITH OTHER RULES

Table 7-2 identifies the other applicable air pollution control rules that limit emissions from the Auxiliary Boiler (B003). The BACT emission rates presented in the permit application for the AMPGS are equivalent to or less than the other requirements presented in this table.

#### Table 7-2

<table>
<thead>
<tr>
<th>AMPGS/Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed AMPGS Auxiliary Boiler BACT</td>
<td>Refer to Table 7-1(^{(1)})</td>
<td>3-hr</td>
<td>The NSPS Subpart Db does not specify any limits for natural gas-fired units with a federally enforceable capacity factor less than 10 percent.</td>
</tr>
<tr>
<td>NSPS Subpart Db</td>
<td>No limits specified.</td>
<td>Not Applicable</td>
<td>Concentration limit is on a dry basis corrected to 3 percent oxygen.</td>
</tr>
<tr>
<td>MACT Subpart DDDDD</td>
<td>CO: 400 ppm by volume</td>
<td>3-hr</td>
<td>This rule requires the best available control techniques and operating practices to minimize CO emissions.</td>
</tr>
<tr>
<td>O.A.C. §3745-21-08</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td>This rule requires the latest available control techniques and operating practices to minimize NOₓ emissions.</td>
</tr>
<tr>
<td>O.A.C. §3745-23-06</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td>(\text{\textsuperscript{1}}) The emissions rates presented in Table 7-1 are based on the emission factors for natural gas combustion in AP-42 Section 1.4 Natural Gas Combustion (7/98): Table 1.4-1 (NOₓ); Table 1.4-2 (Lead, PM/PM₁₀, SO₂ and VOC); Table 1.4-3 (Organic HAPs) and Table 1.4-4 (Metal HAPs). CO emissions are limited by the 40 CFR Part 63 Subpart DDDDD MACT standard.</td>
</tr>
<tr>
<td>(\text{\textsuperscript{2}}) The BACT analysis assumes that all of the PM emissions from the natural gas-fired auxiliary boiler are less than 10 microns in diameter.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 8  

EMERGENCY DIESEL ENGINES BACT

The Emergency Diesel Engine Generator (Z001) and the Fire Water Pump Engine (Z002) at the AMPGS will be used only for emergency and normal maintenance operations. Neither of these diesel engines will be operated more than 500 hours per year.

BACT

Z001 and Z002 are subject to BACT for the same air pollutants as the two main boilers (B001 and B002) (i.e., NO\textsubscript{x}, SO\textsubscript{2}, PM/PM\textsubscript{10}, CO, VOC and H\textsubscript{2}SO\textsubscript{4}). BACT for these units are determined by the following:

- Use of low-sulfur diesel oil (no more than 0.05% sulfur);
- Good combustion design and operation;
- Restriction on annual usage to no more than 500 hours per year; and
- Compliance with any federal standards pertaining to emissions from stationary diesel engines that are applicable to the engines at the proposed AMPGS at the time the diesel engines are purchased.

The BACT emission rates for the diesel-fired engines at the AMPGS are summarized in Table 8-1 and Table 8-2.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Emission Rate(^{(1)})</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NO\textsubscript{x})</td>
<td>Good Combustion Design/Operation</td>
<td>42.37 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO\textsubscript{2})</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>11.26 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM\textsubscript{10})</td>
<td>Good Combustion Design/Operation</td>
<td>2.23 lb/hr</td>
<td>≤ 500 hours/yr</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>18.96 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>1.83 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H\textsubscript{2}SO\textsubscript{4})</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

\(^{(1)}\) The emissions rates presented in the permit application for the emergency generator engine are based on the emission factors in AP-42 Section 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines (10/96): Table 3.4-1 (NO\textsubscript{x}, CO, SO\textsubscript{2}, PM\textsubscript{10} and VOC).

\(^{(2)}\) The BACT analysis assumes that all of the PM emissions from the emergency diesel engines are less than 10 microns in diameter.
Table 8-2
Summary of Proposed BACT Emission Control Strategies for Emergency Fire Water Pump (Z002)

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System(1)</th>
<th>Emission Rate(1)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NOₓ)</td>
<td>Good Combustion Design/Operation</td>
<td>10.14 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>0.67 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM₁₀)</td>
<td>Good Combustion Design/Operation</td>
<td>0.71 lb/hr</td>
<td>≤ 500 hours/yr</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>2.19 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>0.81 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H₂SO₄)</td>
<td>Low-Sulfur Diesel Fuel</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
(1) The emissions rates presented in the permit application for the fire water pump engine are based on the emission factors in AP-42 Section 3.3 Gasoline and Diesel Industrial Engines (10/96): Table 3.3-1 (NOₓ, CO, SO₂ PM₁₀ and VOC).

(2) The BACT analysis assumes that all of the PM emissions from the emergency diesel engines are less than 10 microns in diameter.

COMPARISON OF BACT WITH OTHER RULES

Table 8-3 identifies the other applicable air pollution control rules that limit emissions from the emergency diesel engines. The BACT emission rates presented in the permit application for the AMPGS are equivalent to or less than the other requirements presented in this table.

Table 8-3
Comparison of Proposed BACT for Emergency Diesel Engines (Z001 and Z002) with Other Applicable Requirements

<table>
<thead>
<tr>
<th>AMPGS/ Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed AMPGS Diesel Engine BACT(1)(2)</td>
<td>Refer to Table 8-1 and Table 8-2(1)</td>
<td>3-hr</td>
<td>This rule requires the best available control techniques and operating practices to minimize CO emissions.</td>
</tr>
<tr>
<td>O.A.C. §3745-21-08</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td>This rule requires the latest available control techniques and operating practices to minimize NOₓ emissions.</td>
</tr>
<tr>
<td>O.A.C. §3745-23-06</td>
<td>No limit specified.</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>

(1) The emissions rates presented in the permit application for the fire water pump engine are based on the emission factors in AP-42 Section 3.3 Gasoline and Diesel Industrial Engines (10/96): Table 3.3-1 (NOₓ, CO, SO₂ PM₁₀ and VOC) and Table 3.3-2 (HAPs and other air pollutants).

The emissions rates presented in the permit application for the emergency generator engine are based on the emission factors in AP-42 Section 3.4 Large Stationary Diesel and All Stationary Dual-Fuel Engines (10/96):
Table 8-3
Comparison of Proposed BACT for Emergency Diesel Engines (Z001 and Z002) with Other Applicable Requirements

<table>
<thead>
<tr>
<th>AMPGS/ Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 3.4-1 (NO&lt;sub&gt;x&lt;/sub&gt;, CO, SO&lt;sub&gt;2&lt;/sub&gt;, PM&lt;sub&gt;10&lt;/sub&gt; and VOC) and Tables 3.4-3 and 3.4-4 (HAPs and other air pollutants).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) The BACT analysis assumes that all of the PM emissions from the emergency diesel engines are less than 10 microns in diameter.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION 9  

COOLING CELLS BACT

Each main boiler at AMPGS will be associated with a bank of mechanical draft Cooling Cells (P001 and P002). Air pollutant emissions from the Cooling Cells will consist of the dissolved solids in the water being discharged with water vapor.

BACT

The Cooling Cells P001 and P002 are subject to BACT for PM/PM$_{10}$. BACT for these units is determined by the following:

- Good engineering design, operation and maintenance.

The BACT emission rates for PM/PM$_{10}$ for the Cooling Cells at the AMPGS are summarized in Table 9-1.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>BACT Emission Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM$_{10}$)</td>
<td>Mist Eliminator</td>
<td>0.77 tons/yr</td>
<td>PM/PM$_{10}$ emission rate for each set of Cooling Cells.</td>
</tr>
</tbody>
</table>

COMPARISON OF BACT WITH OTHER RULES

The BACT emission rates for P001 and P002 at the AMPGS are summarized in Table 9-1. There are no other Ohio rules or federal rules that establish emission limits for mechanical draft cooling cells.
The material handling and other fugitive dust producing operations at the AMPGS include:

- Landfill (for FGD By-Product* and Ash Disposal) (F001);
- Paved Roadways (F002) and Unpaved Roadways (F003);
- Coal Storage Piles (F004);
- Limestone Barge Unloading (F005)*;
- Limestone Storage Piles (F006)*;
- Coal Barge Unloading (P901);
- Coal Crushing (P902);
- Limestone Preparation Building (P903)*;
- Gypsum Conveying, Handling and Storage (P904)*;
- Flyash Conveying, Handling and Storage for Boiler B001 (P905); and
- Flyash Conveying, Handling and Storage for Boiler B002 (P906).

* These emission units will only be installed if the AMPGS uses a Limestone-based wet scrubber system.

PM/PM$_{10}$ will be emitted from the dust control systems associated with these operations as well as in fugitive dust that escapes the capture and control systems.

**BACT**

The material handling and other fugitive dust producing operations are subject to BACT for PM/PM$_{10}$. BACT for these units are determined by the following:

- Good engineering design, including enclosures, capture systems and dust collectors;
- Dust collector exhaust discharge rates of no more than 0.005 grains per dscf;
- Use of water and other suitable dust suppression agents as needed; and
- Appropriate visible emission restrictions.
The BACT emission rates for PM/PM$_{10}$ for material handling and other fugitive dust producing operations (e.g., Paved and Unpaved Roadways, Storage Piles, Material Handling Operations, the Landfill, etc.) at the AMPGS are summarized in Table 10-1 and Table 10-2. Refer to the PTI application for information and data related to specific baghouse stack discharges and fugitive emission points.

### Table 10-1
**Summary of Proposed BACT Emission Control Strategies for Fugitive Dust from Landfill (F001), Paved Roadways (F002), Unpaved Roadways (F003), Coal Storage Piles (F004), Limestone Barge Unloading (F005) and Limestone Storage Piles (F006)**

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM)</td>
<td>Dust Suppression</td>
<td>Refer to PTI application for BACT emission rates. BACT will include appropriate VE limits.</td>
</tr>
<tr>
<td>Particulate Matter less than 10 microns in diameter (PM$_{10}$)</td>
<td>Dust Suppression</td>
<td></td>
</tr>
</tbody>
</table>

### Table 10-2
**Summary of Proposed BACT Emission Control Strategies for Material Handling Emissions Units (P901, P902, P903, P904, P905 and P906)**

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Emission Rate</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter (PM)</td>
<td>Dust Suppression, Enclosures and Baghouses</td>
<td>1.60 tons/yr</td>
<td>P901 - Coal Barge Unloading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9.73 tons/yr</td>
<td>P902 – Coal Crushing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.22 tons/yr</td>
<td>P903 – Limestone Prep Building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.33 tons/yr</td>
<td>P904 - Gypsum Conveying, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.50 tons/yr</td>
<td>P905 &amp; P906 - Flyash Conveying, etc.</td>
</tr>
<tr>
<td>Particulate Matter less than 10 microns in diameter (PM$_{10}$)</td>
<td>Dust Suppression, Enclosures and Baghouses</td>
<td>0.75 tons/yr</td>
<td>P901 - Coal Barge Unloading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.94 tons/yr</td>
<td>P902 – Coal Crushing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.16 tons/yr</td>
<td>P903 – Limestone Prep Building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.14 tons/yr</td>
<td>P904 - Gypsum Conveying, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.50 tons/yr</td>
<td>P905 &amp; P906 - Flyash Conveying, etc.</td>
</tr>
</tbody>
</table>

### COMPARISON OF BACT WITH OTHER RULES

Table 10-3 identifies the other applicable air pollution control rules that limit emissions from the material handling and other fugitive dust producing operations. The BACT emission rates presented in the permit application for the AMPGS are equivalent to or less than the other requirements presented in this table.

### Table 10-3
**Comparison of Proposed BACT for Material Handling and Other Fugitive Dust Producing Operations with Other Applicable Requirements**

<table>
<thead>
<tr>
<th>AMPGS/ Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed BACT</td>
<td>Refer to Table 10-1 and</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>
### Table 10-3
Comparison of Proposed BACT for Material Handling and Other Fugitive Dust Producing Operations with Other Applicable Requirements

<table>
<thead>
<tr>
<th>AMPGS/Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSPS Subpart Y § 60.252(c)</td>
<td>20% opacity Method 9</td>
<td>6-min</td>
<td>Opacity from coal processing and conveying equipment.</td>
</tr>
<tr>
<td>NSPS Subpart OOO § 60.672(a)(1) &amp; (a)(2)</td>
<td>Stack – 0.22 gr/dscf</td>
<td>3-hr</td>
<td></td>
</tr>
<tr>
<td>NSPS Subpart OOO § 60.672(b)</td>
<td>Stack – 7% opacity</td>
<td>6-min</td>
<td>Method 9</td>
</tr>
<tr>
<td>NSPS Subpart OOO § 60.672(b)</td>
<td>Fugitive – 10% opacity</td>
<td>6-min</td>
<td>Method 9</td>
</tr>
<tr>
<td>O.A.C. §3745-17-11</td>
<td>Table I/Figure II</td>
<td></td>
<td>PE limits vary by process.</td>
</tr>
<tr>
<td>O.A.C. §3745-17-08</td>
<td>Not Applicable</td>
<td></td>
<td>Letart is not in an Appendix A area.</td>
</tr>
<tr>
<td>O.A.C. §3745-17-07</td>
<td>20% opacity</td>
<td>6-min</td>
<td>Stack (with exceptions specified in the rule)</td>
</tr>
<tr>
<td>O.A.C. §3745-17-07</td>
<td>20% opacity</td>
<td>3-min</td>
<td>Fugitive Dust</td>
</tr>
</tbody>
</table>
As noted above, the AMPGS may utilize an ammonia-wet scrubber rather than a limestone-wet scrubber. If so, the ammonia-wet scrubber will produce a by-product ammonium sulfate crystal. The ammonium sulfate crystals can be reprocessed into a useable fertilizer product.

The ammonium sulfate recovery Fertilizer Plant (P003) will consist of the following components: conveyors and other material transfer operations, rotary dryer, cooler, screens, classifiers, product storage and loading operations. PM/PM$_{10}$ will be emitted from the baghouse and wet scrubber control systems associated with the Fertilizer Plant (P003).

**BACT**

The material handling and other operations associated with the Fertilizer Plant (P003) are subject to BACT for PM and PM$_{10}$. BACT for P003 is determined by the following:

- Good engineering design, including enclosures, capture systems and control equipment;
- Baghouse exhaust discharge rates of no more than 0.005 grains per dscf;
- Wet scrubber exhaust discharge rates of no more than 0.04 grams per dscm; and
- Appropriate visible emission restrictions.

The BACT emission rates for PM/PM$_{10}$ for the Fertilizer Plant at the AMPGS are summarized in Table 11-1.

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Emission Rate$^{(4)}$</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Oxides (NO$_x$)</td>
<td>Good Combustion Design/Operation</td>
<td>0.86 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfur Dioxide (SO$_2$)</td>
<td>Natural Gas</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter (PM) and Particulate Matter less than 10 microns in diameter (PM$_{10}$$^{(2)}$)</td>
<td>Natural Gas Baghouse Scrubber</td>
<td>4.22 lb/hr</td>
<td>3-hr average</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Good Combustion Design/Operation</td>
<td>0.38 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>Good Combustion Design/Operation</td>
<td>0.02 lb/hr</td>
<td></td>
</tr>
<tr>
<td>Sulfuric Acid (H$_2$SO$_4$)</td>
<td>Natural Gas</td>
<td>Negligible</td>
<td></td>
</tr>
</tbody>
</table>
### Table 11-1

<table>
<thead>
<tr>
<th>Air Pollutant</th>
<th>Description of Control System</th>
<th>Emission Rate(^{(1)})</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

\(^{(1)}\) The emissions rates presented in this BACT analysis are based on the emission factors for natural gas combustion in AP-42 Section 1.4 Natural Gas Combustion (7/98): Table 1.4-1 (NO\(_x\)) and Table 1.4-2 (PM/PM\(_{10}\), SO\(_2\) and VOC).

\(^{(2)}\) The BACT analysis assumes that all of the PM emissions from the dryer and control devices are less than 10 microns in diameter.

### COMPARISON OF BACT WITH OTHER RULES

Table 11-2 identifies the other applicable air pollution control rules that limit emissions from the fertilizer plant (P003). The BACT emission rates presented in the permit application for the AMPGS are equivalent to or less than the other requirements presented in this table.

### Table 11-2

<table>
<thead>
<tr>
<th>AMPGS/Regulation</th>
<th>Proposed/Required Emission Rates</th>
<th>Averaging Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed AMPGS BACT</td>
<td>Refer to Table 11-1</td>
<td>3-hr</td>
<td></td>
</tr>
<tr>
<td>O.A.C. §3745-17-11</td>
<td>Table I/Figure II</td>
<td>3-hr</td>
<td>PE limits vary by process. The BACT limits are more restrictive.</td>
</tr>
<tr>
<td>O.A.C. §3745-17-08</td>
<td>Not Applicable</td>
<td>NA</td>
<td>Letart is not in an Appendix A area.</td>
</tr>
<tr>
<td>O.A.C. §3745-17-07</td>
<td>20% opacity</td>
<td>6-min</td>
<td>Stack (with exceptions specified in the rule)</td>
</tr>
<tr>
<td></td>
<td>20% opacity</td>
<td>3-min</td>
<td>Fugitive Dust</td>
</tr>
<tr>
<td>NSPS Subpart PP § 60.422a(^{(1)})</td>
<td>0.30 lb particulate emissions from the dryer/ton of ammonium sulfate produced</td>
<td>3-hr</td>
<td>The rotary dryer at the Fertilizer Plant (P003) will produce a maximum of 33 tons of ammonium sulfate/hr with an allowed emission rate of 9.9 lb/hr pursuant to 40 CFR Part 60 Subpart PP. The BACT limit of 4.22 lb/hr is more restrictive than this NSPS limit.</td>
</tr>
</tbody>
</table>

Note:

\(^{(1)}\) It is not clear if 40 CFR Part 60 Subpart PP applies to the production of ammonium sulfate fertilizer as a by-product of the operation of an air pollution control system. Regardless, the BACT emission rate for PM/PM\(_{10}\) proposed for this emissions unit is more restrictive than the particulate emission rate specified in this NSPS.
APPENDIX A

PSD Permits for Comparable Pulverized Coal-Fired Boilers

- Prairie State Generating Company, LLC
- Thoroughbred Generating Company, LLC
- Longview Power, LLC
- Santee Cooper Cross Generating Station
- Elm Road Generating Station
CONSTRUCTION PERMIT - PSD APPROVAL
NSPS-NESHAP EMISSION UNITS

PERMITTEE

Prairie State Generating Company, LLC
Attn: Dianna Tickner, President
701 Market Street, Suite 781
St. Louis, Missouri 63010

Application No.: 01100065 I.D. No.: 189808AAB
Applicant’s Designation: Date Received: October 19, 2001
Subject: Electricity Generation Facility
Date Issued: April 28, 2005
Location: Southwest Corner of Marigold Road, Off of Washington County Highway
12, Approximately 5 Miles East Northeast of Marissa

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission sources and air pollution control equipment consisting of a mine-mouth coal-fired power plant with two power boilers, cooling towers, fuel handling and storage, limestone handling and storage, ash handling and storage, auxiliary gas-fired boiler, and ancillary operations, as described in the above referenced application. This Permit is granted based upon and subject to the findings and conditions that follow.

In conjunction with this permit, approval is given with respect to the federal regulations for Prevention of Significant Deterioration of Air Quality (PSD) for the plant, as described in the application, in that the Illinois Environmental Protection Agency (Illinois EPA) finds that the application fulfills all applicable requirements of 40 CFR 52.21. This approval is issued pursuant to the federal Clean Air Act, the federal regulations promulgated thereunder at 40 CFR 52.21 for the PSD program, and a Delegation of Authority agreement between the United States Environmental Protection Agency (USEPA) and the Illinois EPA for the administration of the PSD Program. This approval becomes effective on June 8, 2005, as authorized by the provisions of 40 CFR 124.15, unless a petition for review is filed in accordance with provisions of 40 CFR 124.19. For purposes of any appeal petition that may be filed, the 30 day period for requesting review begins on May 9, 2005. This approval is based upon the findings that follow. This approval is subject to the following conditions. This approval is also subject to the general requirement that the plant be developed and operated consistent with the specifications and data included in the application and any significant departure from the terms expressed in the application, if not otherwise authorized by this permit, must receive prior written authorization from the Illinois EPA.

If you have any questions on this permit, please call Shashi Shah at 217/782-2113 (TDD 217/782-9143).

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

cc: Region 3
USEPA Region V
# TABLE OF CONTENTS

## INTRODUCTION

**FINDINGS**

**IDENTIFICATION OF SIGNIFICANT EMISSION UNITS**

## SECTION 1  SOURCE-WIDE CONDITIONS

1.1 Effect of Permit  
1.2 Validity of Permit and Commencement of Construction  
1.3 Fuel Supply  
1.4 General Provisions for a Major Source of Hazardous Air Pollutants (HAPs)  
1.5 Ancillary Equipment, including Diesel Engines  
1.6 Authorization to Operate Emission Units  
1.7 Post-Construction Ambient Monitoring  
1.8 Risk Management Plan  
1.9 Supplemental Requirements for SO₂ Allowances

## SECTION 2  UNIT-SPECIFIC CONDITIONS FOR PARTICULAR EMISSION UNITS

2.1 Boilers  
2.2 Bulk Material Handling, Processing and Storage Operations  
2.3 Cooling Towers  
2.4 Auxiliary Boiler  
2.5 Roadways and Other Open Area Sources of Fugitive Dust

## SECTION 3  TRADING PROGRAM CONDITIONS

3.1 Acid Rain Program Requirements  
3.2 NOₓ Trading Program

## SECTION 4  GENERAL PERMIT CONDITIONS

4.1 Standard Conditions  
4.2 Requirements for Emission Testing  
4.3 Requirements for Records for Deviations  
4.4 Retention and Availability of Records  
4.5 Notification or Reporting of Deviations  
4.6 General Requirements for Notification and Reports

## ATTACHMENTS

1. Tables  
2. Standard Permit Conditions  
3. Acid Rain Permit  
4. Determining the Sorbent Injection Rate
INTRODUCTION: FINDINGS

1a. Prairie State Generating Company, LLC (Prairie State) has requested a permit for a mine-mouth coal fired power plant with a nominal capacity of 1500 MWe net. The proposed plant would have two identical pulverized coal boilers equipped with low-NOx burners, selective catalytic reduction (SCR), electrostatic precipitator (ESP), wet flue gas desulfurization (WFGD) and wet electrostatic precipitator (WESP). Other emission units would include: fuel handling and storage, ash handling and storage, limestone handling and storage, cooling towers, and an auxiliary boiler at the power plant facility; coal handling operations at the new underground coal mine; and ancillary operations.

b. The boilers, which each would have a maximum rated capacity of about 7,450 million Btu/hour, would be fired on coal as their primary fuel, with natural gas used as the startup fuel. The boilers would be designed for raw Illinois No. 6 coal from a new underground mine to be developed adjacent to the boiler complex. The design coal supply would nominally have 4.0 percent sulfur by weight and 8,780 Btu per pound as received at the power plant facility, following routine preparation to separate rock from the coal fuel. As part of its review of the application, the Illinois EPA considered requiring washing of this coal as a means to specifically reduce its sulfur content. The Illinois EPA determined that for mine-mouth coal, any benefits of coal washing would be outweighed by the adverse environmental, energy and economic impacts associated with coal washing and storage of associated coal waste. To address potential interruptions in the mine-mouth coal supply and facilitate reliable operation of the power plant, the boilers would also be allowed to use Illinois No. 6 coal and Illinois No. 5 coal (which is similar to the mine-mouth coal) from other mines. Because the source(s) of this coal are not specified, e.g., the coal could be obtained from mines that already have a washing facility and that are some distance from the plant, the analyses and evaluation performed for coal washing at the proposed plant are not applicable for the use of such non-mine-mouth coals. Accordingly, coal for the boilers, other than mine-mouth coal, is required to be washed.

2. The plant would be located in rural Washington County. The site is in an area that is currently designated attainment for all criteria pollutants.

3. The proposed plant is a major source under the PSD rules. This is because the boilers would have potential annual emissions of sulfur dioxide (SO2), nitrogen oxides (NOx), particulate matter (PM) as PM10, carbon monoxide (CO), volatile organic material (VOM) and sulfuric acid mist, that are in excess of 100 tons. (Refer to Table I for the potential emissions of the boilers.)

4. The proposed plant is a major source for emissions of hazardous air pollutants (HAPs). The potential emissions from the plant will be greater than 10 tons of an individual HAP, i.e., hydrogen chloride and hydrogen fluoride, and more than 25 tons in aggregate for a combination of HAPs. Therefore, the plant is being subjected to review under Section 112(g) of the federal Clean Air Act.
5a. After reviewing the materials submitted by Prairie State, the Illinois EPA has determined that the project will (i) comply with applicable Pollution Control Board (Board) emission standards, (ii) comply with applicable federal emission standards, (iii) utilize Best Available Control Technology (BACT) on emissions as required by PSD, and (iv) utilize Maximum Achievable Control Technology (MACT) for emissions of HAPs as required by Section 112(g) of the Clean Air Act.

b. The determinations of BACT and MACT made by the Illinois EPA for the proposed plant are the control technology determinations contained in the permit conditions for specific emission units.

c. Because USEPA has not adopted MACT standards for utility boilers at power plants pursuant to Section 112 of the Clean Air Act, this permit contains a case-by-case determination of MACT pursuant to Section 112(g) of the Clean Air Act. This addresses the possibility that such standards are ultimately required but are not yet adopted by USEPA or are not effective when the plant would begin to operate, so that MACT must be established pursuant to Section 112(g) of the Clean Air Act. For this purpose, limits related to HAP emissions constitute MACT. As limits are not present for specific HAPs, the MACT determination relies upon the limits established for other pollutants to also restrict emissions of HAPs for which individual limits are not set.

6a. The air quality analysis submitted by Prairie State and reviewed by the Illinois EPA shows that the proposed project will not cause or contribute to violations of the National Ambient Air Quality Standard (NAAQS) for NO₂, SO₂, PM/PM₁₀, and CO. The air quality analysis shows compliance with the Class II allowable increment levels established under the PSD regulations.

b. Prairie State has also evaluated the impact of the proposed plant on air quality and visibility in the Wilderness Area at the Mingo Wildlife Refuge, which is located approximately 140 kilometers southwest of the proposed plant. This analysis shows that the plant will not violate the Class I air quality increments applicable in the Mingo Wilderness Area. The Illinois EPA also determined based on the visibility assessment submitted by Prairie State that the proposed plant would not have an adverse impact on visibility values in the Mingo Class I Area.

i. Under the PSD rules, the Illinois EPA must determine whether emissions from this plant will have an adverse impact on visibility and other air quality related values at Class I areas. Prairie State submitted a visibility assessment using the guidance prepared by the Federal Land Managers’ Air Quality Related Values Work Group (FLAG), with adjustments that the Illinois EPA determined were appropriate for the Mingo Area. This assessment showed when taking into account weather phenomena (rain, snow, fog, drizzle, etc.) on natural background light extinction and visitor use, the plant would not have an adverse impact on visibility. Only one day out of the three years of meteorological data used in the modeling predicted a change in the extinction
coefficient of greater than 10%, i.e., a maximum 12.1% change. Copies of these analyses were provided to the Federal Land Manager for the Mingo Area, i.e., the United States Fish and Wildlife Service (USFWS) and the USFWS subsequently submitted comments indicating that it believed that the project would have an adverse impact on air quality related values at the Mingo Area.

ii. Having considered the USFWS comments and other information in the record, Illinois EPA finds that this project will not have an adverse impact on the Mingo Area. While the Illinois EPA considered the FLAG guidance, the Illinois EPA recognized that the FLAG guidance must be applied to include the effects of weather phenomena on natural background light extinction and the effect of visitor use of the Class I area. This finding is consistent with the FLAG guidance, which notes that adverse impact on visibility is defined in federal visibility protection regulations (40 CFR 51.300, et seq., Section 52.27) as “visibility impairment, which interferes with the management, protection, preservation or enjoyment of the visitor’s visual experience of the federal Class I area. This determination must be made on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency, and time of visibility impairment, and how these factors correlate with: (1) times of visitor use of the federal Class I area, and (2) the frequency and timing of natural conditions that reduce visibility.”

iii. This permit contains requirements for the coal-fired boilers that were not present in the draft permit that reduce the emissions and air quality impacts of the plant, which were not considered as part of the USFWS’ original evaluation. These requirements include an additional limit for the SO₂ emissions in terms of control efficiency and a more stringent limit for NOₓ emissions (Conditions 2.1.2(b)(ii)(B) and (b)(iii)). This permit also includes certain requirements proposed by Prairie State specifically to ameliorate any potential impact on air quality related values at the Mingo Area (Conditions 1.1.9, 2.1.7(a)(ii), and 2.1.7(b)(ii)). Most notably, Prairie State will retire 25 percent more SO₂ allowances than required to comply with the Acid Rain program, in proportion to actual emissions, until (1) implementation of additional cap and trade federal regulation or legislation (such as the Clean Air Interstate Rule); or (2) other new federal or state regulations limiting SO₂ emissions from power plants are adopted and take effect. This commitment goes significantly beyond the requirements of the federal Acid Rain program, which already requires Prairie State to obtain and retire SO₂ allowances on a one-for-one basis for actual emissions of SO₂ and acts to prevent any net increase in SO₂ emissions to the atmosphere as a result of the operation of the plant. Nor did the USFWS original evaluation include a consideration of other related developments that affect emissions of Illinois’ coal-fired power plants, i.e., the development of a Consent Decree to specifically address emissions of Dynegy’s plants, including the Baldwin plant, and the USEPA’s actual adoption of the Clean Air Interstate Rule.
c. The Illinois EPA has evaluated the impact of the proposed plant on ozone air quality. The Illinois EPA’s evaluation concludes that the plant will not interfere with improvements in ozone air quality and attainment of the ozone standard in the St. Louis area.

7. The Illinois EPA has determined that the proposed plant complies with all applicable Board Air Pollution Control Regulations; the federal rules for PSD, 40 CFR 52.21; applicable federal New Source Performance Standards (NSPS), 40 CFR 60; and Section 112(g) of the Clean Air Act and applicable federal regulations thereunder, National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart B.

8. In conjunction with the issuance of this permit, the Illinois EPA has also issued an Acid Rain permit for the proposed coal boilers, to address requirements of the federal Acid Rain program. These boilers would be affected units under the Acid Rain Deposition Control Program pursuant to Title IV of the Clean Air Act. As affected units under the Acid Rain Program, Prairie State must hold SO₂ allowances each year for the actual emissions of SO₂ from the boilers. The boilers are also subject to emissions monitoring requirements pursuant to 40 CFR Part 75. As the Acid Rain permit relates to the Acid Rain Program, it is not considered part of the PSD approval.

9. In conjunction with the issuance of this permit, the Illinois EPA is also issuing a Budget Permit for the proposed coal boilers, to address requirements of the NOₓ Trading Program. As the Budget Permit relates to the NOₓ Trading Program, it is not considered part of the PSD approval.

10. A copy of the application, the project summary prepared by the Illinois EPA, a draft of this permit, and a draft of the Acid Rain and Budget permits were placed in a nearby public repository, and the public was given notice and an opportunity to examine this material and to participate in a public hearing and to submit comments on these matters.
## INTRODUCTION: IDENTIFICATION OF SIGNIFICANT EMISSIONS UNITS

<table>
<thead>
<tr>
<th>Unit Number</th>
<th>Description</th>
<th>Emission Control Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Boiler 1 - Pulverized Coal Boiler</td>
<td>Good Combustion Practices, Low NO\textsubscript{x} Burners, Selective Catalytic Reduction, Electrostatic Precipitator, Wet Flue Gas Desulfurization (Scrubber), and Wet Electrostatic Precipitator</td>
</tr>
<tr>
<td></td>
<td>Boiler 2 - Pulverized Coal Boiler</td>
<td>Good Combustion Practices, Low NO\textsubscript{x} Burners, Selective Catalytic Reduction, Electrostatic Precipitator, Wet Flue Gas Desulfurization (Scrubber), and Wet Electrostatic Precipitator</td>
</tr>
<tr>
<td>2</td>
<td>Fuel and Other Bulk Material Handling, Processing and Storage Operations</td>
<td>Baghouses and Dust Control Measures (application of water or dust suppressant, enclosures or compaction, and filtration)</td>
</tr>
<tr>
<td>3</td>
<td>Cooling Towers</td>
<td>High-Efficiency Drift Eliminators</td>
</tr>
<tr>
<td>4</td>
<td>Auxiliary Boiler - Natural Gas Fired Boiler</td>
<td>Low-NO\textsubscript{x} Burners, Limited Operations, Proper Combustion, Operation and Maintenance</td>
</tr>
<tr>
<td>5</td>
<td>Roadways and Other Sources of Fugitive Dust</td>
<td>Paving and Dust Control Measures (application of water or dust suppressions and dust collection)</td>
</tr>
</tbody>
</table>
SECTION 1: SOURCE-WIDE PERMIT CONDITIONS

CONDITION 1.1: EFFECT OF PERMIT

a. This permit does not relieve the Permittee of the responsibility to comply with all local, state and federal regulations that are part of the applicable Illinois’ State Implementation Plan, as well as all other applicable federal, state and local requirements.

b. In particular, this permit does not relieve the Permittee from the responsibility to carry out practices during the construction and operation of the plant, such as application of water or dust suppressant sprays to unpaved traffic areas, as necessary to minimize fugitive dust and prevent an air pollution nuisance from fugitive dust, as prohibited by 35 IAC 201.141.

CONDITION 1.2: VALIDITY OF PERMIT AND COMMENCEMENT OF CONSTRUCTION

a. This permit shall become invalid as applied to the plant and each boiler at the plant if construction is not commenced within 18 months of the PSD approval becoming effective, if construction of a boiler is discontinued for a period of 18 months or more, or if construction of a boiler is not completed within a reasonable period of time. The Illinois EPA may extend the 18-month period upon a satisfactory showing that an extension is justified. This condition supersedes Standard Condition 1 of the permit. (See Attachment 2)

b. For purposes of the above provisions, the definitions of “construction” and “commence” at 40 CFR 52.21 (b) (8) and (9) shall apply, which requires that a source must enter into a binding agreement for on-site construction or begin actual on-site construction. (See also the definition of “begin actual construction,” 40 CFR 52.21 (b) (11)).

CONDITION 1.3: FUEL SUPPLY

a. The power plant shall be developed and operate as a mine-mouth plant.

Note: Acceptance of any coal by rail or truck would require a separate state construction permit, as this permit does not address receiving of coal by rail or truck. The proposed use of unwashed coal delivered by rail or truck by the plant would require approval under the PSD rules. As part of such approval, the determination of BACT for the coal boilers would be subject to review and possible revision as needed to address the new source(s) of coal and requirements for coal washing as related to control of SO₂ emissions.

i. As a mine-mouth facility, the plant shall use coal delivered by conveyor belt directly from the mining facility or facilities in the two coal-fired boilers, except during extended interruptions in the mine-mouth coal supply.
During an extended interruption in the mine-mouth coal supply, the plant may use washed Illinois No. 5 and No. 6 coal from off-site, as further provided below:

A. For an incident to be considered an extended interruption in the coal supply to the boilers, the interruption must be caused by events or circumstances that could not have been reasonably prevented by the Permittee, its contractors, or any entity controlled by the Permittee, and the interruption in the coal supply must be of longer duration than the interruptions that routinely occur in the operation of mining facilities (which the Permittee can address by maintaining a reserve supply of coal at the plant).

B. To continue to qualify for the exception provided for extended interruptions in the mine-mouth coal supply, the Permittee must be undertaking a program to restore the coal supply that has experienced the interruption, in a reasonable period of time that is consistent with the nature of the efforts needed to restore such coal supply. In the event that only a partial interruption occurs or the operation of the mining facility is partially restored, the exception for an extended interruption in the coal supply only applies to the portion of the coal supply that is affected.

C. The Permittee shall notify the Illinois EPA prior to using coal from off-site. This notification shall include a detailed description of the nature of the anticipated interruption in the mine-mouth coal supply and document why it qualifies as an extended interruption. This notification shall be submitted 15 days before beginning to use off-site coal or otherwise as soon as it is practicable to do so. Thereafter, the Permittee shall submit periodic progress reports on a schedule as specified by the Illinois EPA.

CONDITION 1.4: GENERAL PROVISIONS FOR A MAJOR SOURCE OF HAZARDOUS AIR POLLUTANTS (HAPS)

a. As the plant is a new major source of HAPs for purposes of Section 112 of the Clean Air Act, the Permittee shall comply with all applicable requirements contained in 40 CFR Part 63, Subpart A. In particular, for the various HAP emission units at the source, the Permittee shall comply with the following applicable requirements of 40 CFR 63 Subpart A, related to startup, shutdown, and malfunction, as defined at 40 CFR 63.2:

i. The Permittee shall at all times, including periods of startup, shutdown, and malfunction as defined at 40 CFR 63.2, operate and maintain emission units at the 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 to the levels required by the relevant standards, i.e., meet the emission standard(s) or comply with the applicable Startup, Shutdown, and Malfunction Plan (Plan), as
required below. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Illinois EPA and USEPA, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the Plan), review of operation and maintenance records, and inspection of the unit. [40 CFR 63.6(e)(1)(i)]

ii. The Permittee shall correct malfunctions as soon as practicable after their occurrence in accordance with the applicable Plan. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Permittee shall comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. [40 CFR 63.6(e)(1)(ii)]

iii. These operation and maintenance requirements, which are established pursuant to Section 112 of the Clean Air Act, are enforceable independent of applicable emissions limitations and other applicable requirements. [40 CFR 63.6(e)(1)(iii)]

b. The Permittee shall develop, implement, and maintain written Startup, Shutdown, and Malfunction Plans (Plans) that describe, in detail, procedures for operating and maintaining the various emission units at the plant during periods of startup, shutdown, and malfunction and a program of corrective action for a malfunctioning process, and air pollution control and monitoring equipment used to comply with the relevant emission standards. These Plans shall be developed to satisfy the purposes set forth in 40 CFR 63.6(e)(3)(i)(A), (B) and (C). The Permittee shall develop its initial Plans prior to the initial startup of an emission unit(s). [40 CFR 63.6(e)(3)(i)]

i. During periods of startup, shutdown, and malfunction of an emission unit, the Permittee shall operate and maintain such unit, including associated air pollution control and monitoring equipment, in accordance with the procedures specified in the applicable Plan required above. [40 CFR 63.6(e)(3)(ii)]

ii. When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the applicable Plan, the Permittee shall keep records for that event which demonstrate that the procedures specified in the Plan were followed. In addition, the Permittee shall keep records of these events as specified in 40 CFR 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the Permittee shall confirm in the periodic compliance report that actions taken during periods of startup, shutdown, and malfunction were consistent with the applicable Plan, as required by 40 CFR 63.10(d)(5). [40 CFR 63.6(e)(3)(iii)]
iii. If an action taken by the Permittee during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) of an emission unit is not consistent with the procedures specified in the applicable Plan, and the emission unit exceeds a relevant emission standard, then the Permittee must record the actions taken for that event and must promptly report such actions as specified by 40 CFR 63.6(d)(5), unless otherwise specified elsewhere in this permit or in the CAAPP Permit to be issued for the plant. [40 CFR 63.6(e)(3)(iv)]

iv. The Permittee shall make changes to the Plan for an emission unit if required by the Illinois EPA or USEPA, as provided for by 40 CFR 63.6(e)(3)(vii), or as otherwise required by 40 CFR 63.6(e)(viii). [40 CFR 63.6(e)(3)(vii) and (viii)]

v. These Plans are records required by this permit, which the Permittee must retain in accordance with the general requirements for retention and availability of records (See Condition 4.4). In addition, when the Permittee revises a Plan, the Permittee must also retain and make available the previous (i.e., superseded) version of the Plan for a period of at least 5 years after such revision. [40 CFR 63.6(e)(v) and 40 CFR 63.10(b)(1)]

Note: See also Condition 2.1.6 for the coal boilers.

CONDITION 1.5: ANCILLARY EQUIPMENT, INCLUDING THE TWO DIESEL ENGINES

a. Ancillary equipment, including the two diesel engines, shall be operated in accordance with good air pollution control practices to minimize emissions.

b. i. The diesel engines shall be used as emergency engines, as defined at 35 IAC 211.1920.

ii. The power output of each diesel engine shall be no more than 1,500 horsepower, as necessary to qualify as an emergency or standby unit as defined by 35 IAC 211.1920.

iii. Operation of each diesel engine shall not exceed 340 hours per year; provided, however, that the Illinois EPA may authorize temporary operation of each diesel engine in excess of 340 hours per year to address extraordinary circumstances that require operation of the engines, by issuance of a separate State construction permit addressing such circumstances.

iv. The fuel fired in the diesel engines shall be ultra-low sulfur (ULS) diesel fuel or other alternative ultra-low sulfur fuel oil containing no more than 15 ppm sulfur (e.g., bio-diesel).

Note: These requirements for the fuel fired in the engines constitute the determination of Best Available Control Technology (BACT) for the engines, as required under the PSD rules.
CONDITION 1.6: AUTHORIZATION TO OPERATE EMISSION UNITS

a.  
   i. Under this permit, each coal boiler and associated equipment may be operated for a period that ends 180 days after the boiler first sends electricity to the grid to allow for equipment shakedown and required emissions testing. This period may be extended by Illinois EPA upon request of the Permittee if additional time is needed to complete shakedown or perform emission testing. This condition supersedes Standard Condition 6. (See Attachment 2)

   ii. Upon successful completion of emission testing of a pulverized coal boiler demonstrating compliance with applicable limitations, the Permittee may continue to operate the boiler and associated equipment as allowed by Section 39.5(5) of the Environmental Protection Act.

b.  
   i. The remainder of the plant, excluding the coal boilers, may be operated under this construction permit for a period of 365 days after initial startup of a pulverized coal boiler. This period of time may be extended by the Illinois EPA for up to an additional 365 days upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties experienced during shakedown of the plant. This condition supersedes Standard Condition 6. (See Attachment 2)

   ii. Upon successful completion of emission testing of a pulverized coal boiler demonstrating compliance with applicable limitations, the Permittee may continue to operate the remainder of the plant as allowed by Section 39.5(5) of the Environmental Protection Act.

c.  
   For the coal boilers and other emission units that are subject to federal New Source Performance Standards (NSPS), the Permittee shall fulfill applicable notification requirements of the NSPS, 40 CFR 60.7(a), including:

   i. Written notification of commencement of construction no later than 30 days after such date (40 CFR 60.7(a)(1)); and

   ii. Written notification of the actual date of initial startup within 15 days after such date (40 CFR 60.7(a)(3))

CONDITION 1.7: POST-CONSTRUCTION MONITORING

a.  
   The Permittee shall construct, operate and maintain an ambient air monitoring station, as follows, at an appropriate location in southwestern Illinois at a site outside the St. Louis metropolitan area to assist the Illinois EPA in evaluating PM2.5 air quality in the region and to support evaluation of the impact of sources in southwestern Illinois on air quality and visibility in the Mingo Wilderness Area.

   i. Monitoring shall be conducted in accordance with written monitoring procedures, in a manner that is consistent with applicable USEPA regulations for ambient air quality monitoring and collection of meteorological data.
ii. Ambient monitoring shall be conducted for speciated PM2.5 and ammonia. Meteorological data, i.e., temperature, wind direction and speed, humidity, and solar radiation, shall also be collected at the monitoring station.

iii. The Illinois EPA shall be consulted on the development of this monitoring station. The site for the station and the monitoring and meteorological instruments shall be subject to review and approval by the Illinois EPA prior to entering into site or purchase agreements. The procedures for monitoring shall be subject to review and comment by the Illinois EPA prior to initiation of ambient monitoring.

iv. The Permittee shall provide the Illinois EPA with reasonable access to the monitoring station, including allowing the Illinois EPA to conduct quality assurance audits of instruments. All logs and other operating records kept in conjunction with monitoring shall be considered records required by this permit, except that these records may be kept at the monitoring station until such time as the station is closed, when these records shall be transferred to the plant.

v. All air quality and meteorological data collected at the station, along with quality assurance data, shall be supplied to the Illinois EPA, which may make all such data publicly available under the Freedom of Information Act.

vi. Monitoring shall begin at least one year before the scheduled startup of the coal boilers, to assure that the monitoring station is fully operational when the plant begins operation and to obtain base air quality data.

vii. Monitoring shall continue for at least three full calendar years following the completion of the shakedown of the coal boilers.

b. As an alternative to conducting monitoring as set forth above, the Permittee may assist the Illinois EPA in conducting comparable monitoring in the southwestern Illinois region, by supplying equipment, developing monitoring sites or providing other support for the Illinois EPA’s monitoring program, while the Illinois EPA or other parties assume responsibility for the day-to-day operation of the monitoring stations. For this purpose, monitoring may be conducted at a station in southwestern Illinois located in the St. Louis metropolitan area, as well as at stations located outside the metropolitan area. If the Permittee elects this alternative, the level of support provided by the Permittee shall be comparable to the total expense that the Permittee would have experienced had it conducted the above ambient monitoring.

c. These requirements for ambient monitoring may be relaxed in the CAAPP Permit issued for the plant if the Illinois EPA determines that sufficient air quality data has been collected to satisfy the purposes for this monitoring.
CONDITION 1.8: RISK MANAGEMENT PLAN

Should this source be subject to the Chemical Accident Prevention Provisions in 40 CFR Part 68, then the Permittee shall submit:

a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or

b. A certification statement that the source is in compliance with all applicable requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan.

Note: This condition is imposed in this permit pursuant to 40 CFR 68.215(a).

CONDITION 1.9: SUPPLEMENTAL REQUIREMENTS FOR SO₂ ALLOWANCES

The Permittee shall retire additional SO₂ allowances under the federal Acid Rain Program (See Condition 2.1.5(a), Condition 3.1, and Attachment 3) above those otherwise required by this program in an amount equal to 25 percent of the actual SO₂ emissions from affected units (the coal-fired boilers) until such time as either: (1) An additional federal "cap and trade" control program is adopted and in effect covering SO₂ emissions from coal-fired power plants (such as the Clean Air Interstate Rule), or (2) Other federal or state program is adopted and in effect further controlling SO₂ emissions from power plants on a regional basis, whichever occurs first.

Note: For example, in 2008 when the annual SO₂ emissions from the coal-fired boilers are limited to 10,679 tons, this condition could result in the retirement of up to 2,670 additional SO₂ allowances (0.25 x 10,679 tons/year = 2,669.8). The actual amount of additional allowances retired would be determined from the actual annual SO₂ emissions of the boilers. This condition reflects a commitment made by the Permittee to the United States Fish and Wildlife Service (USFWS) in response to concerns expressed by the USFWS about the impact of the plant on Air Quality Related Values in the Wilderness Area in the Mingo Wildlife Refuge in southeastern Missouri. (See also Conditions 2.1.7(a)(ii) and (b)(ii).)
SECTION 2: UNIT-SPECIFIC CONDITIONS FOR PARTICULAR EMISSION UNITS

CONDITION 2.1: UNIT-SPECIFIC CONDITIONS FOR THE BOILERS

2.1.1 Emission Unit Description

The affected units for the purpose of these specific permit conditions are two pulverized coal boilers with individual air pollution control trains. The boilers would also have the capability to burn natural gas, which would be used for startup of the boilers.

2.1.2 Control Technology Determination

a. Each boiler shall be operated and maintained with the following features to control emissions:

i. Good combustion practices.

ii. Low-NO_x burners.

iii. Selective catalytic reduction (SCR).

iv. Electrostatic precipitator (ESP).

v. Wet flue gas desulfurization (WFGD).

vi. Wet electrostatic precipitator (WESP).

b. The emissions from each boiler shall not exceed the following limits:

i. A. PM - 0.015 lb/million Btu.

This limit shall apply as a 3-hour block average, with compliance determined by emission testing for PM (filterable) in accordance with Condition 2.1.8 and from equipment operation. This limit shall not apply during startup, shutdown and malfunction as addressed by Condition 2.1.2(e).

B. PM_{10} - 0.035 lb/million Btu.

This limit shall apply as a 3-hour block average, with compliance determined by emission testing for PM (filterable and condensable) in accordance with Condition 2.1.8 and from equipment operation. This limit shall not apply during startup, shutdown and malfunction as addressed by Condition 2.1.2(e). A lower limit (as low as 0.018 lb/million Btu) may be set pursuant to Condition 2.1.17, which requires reevaluation of the above limit based upon actual PM_{10} emissions of the affected boilers.
ii. **A. SO\textsubscript{2} - 0.182 lb/million Btu.**

This limit shall apply as a 30 day rolling average, with compliance determined using the compliance procedures set forth in the NSPS, 40 CFR 60.48a. In lieu of the compliance procedures of the NSPS, for a 30 day period that includes a startup of an affected boiler, compliance may be determined on a mass-basis by calculating the average emission rate in lb/million Btu from the total emissions of SO\textsubscript{2} and the total heat input to the boiler during the period, as determined under the methodology of the Acid Rain program.

**B. SO\textsubscript{2} – 98 percent control (2 percent of the potential combustion concentration of the coal supply for the boilers).**

This limit shall take effect 18 months after the initial startup of the boiler. This limit shall apply as a 12 month rolling average with compliance determined based on the actual SO\textsubscript{2} emissions of the boiler determined using the procedures set forth under the Acid Rain program and its theoretical emissions of SO\textsubscript{2}, that would result from combustion of coal without emissions control systems, calculated as the product of the average SO\textsubscript{2} input rate from “as fired” fuel analyses, determined in accordance with 40 CFR 60, Appendix A, Method 19, and 60.48a(b), and the heat input to the boilers, also determined using procedures under the Acid Rain program.

Note: These limits for SO\textsubscript{2} emissions apply to all operations of a boiler, that is, emissions of SO\textsubscript{2} during periods of startup, shutdown and malfunction are not excluded from the determination of compliance.

iii. **NO\textsubscript{x} - 0.07 lb/million Btu.**

This limit shall apply as a 30 day rolling average using the compliance procedures set forth in the NSPS, 40 CFR 60.48a. In lieu of the compliance procedures of the NSPS, for a 30 day period that includes a startup or shutdown of an affected boiler compliance may be determined on a mass-basis by calculating the average emission rate in lb/million Btu from the total emissions of NO\textsubscript{x} and the total heat input to the boiler during the period, as determined under the methodology of the NO\textsubscript{x} Trading program.

Note: This limit for NO\textsubscript{x} emissions applies to all operations of a boiler, that is, emissions of NO\textsubscript{x} during startup, shutdown and malfunction are not excluded from the determination of compliance.
iv. A. CO - 0.12 lb/million Btu.

This limit shall apply as a 24-hour block average basis, with continuous monitoring conducted in accordance with Condition 2.1.9. This limit shall not apply during periods of startup and shutdown as addressed below.

B. CO – 893 lb/hr* for startup and shutdown.

This limit shall apply as a 24-hour block average basis with continuous monitoring conducted in accordance with Condition 2.1.9. This limit shall apply during periods of startup and shutdown as also addressed by Condition 2.1.2(e). (For a startup event, the 24-hour period shall begin with the startup of the boiler, i.e., initial firing of fuel. For a shutdown event, the 24-hour period shall end with the shutdown of the boiler, i.e., cessation of fuel flow to the boiler.)

* This value is the product of the rated capacity of the boiler in million Btu/hour and the generally applicable BACT limit for CO, 0.12 lb/million Btu.

v. VOM - 0.004 lb/million Btu.

This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.1.8 and equipment operation. This limit shall not apply during startup, shutdown and malfunction as addressed by Condition 2.1.2(e).

vi. Sulfuric Acid Mist – 0.005 lb/million Btu.

This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.1.8 and equipment operation. This limit shall not apply during startup, shutdown and malfunction as addressed by Condition 2.1.2(e).

vii. Fluorides – 0.00026 lb/million Btu.

This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.1.8 and equipment operation. This limit shall not apply during startup, shutdown and malfunction as addressed by Condition 2.1.2(e).

c. i. The boilers shall each comply with the requirements for control of mercury emissions from coal-fired utility boilers as established by USEPA pursuant to the Clean Air Act.
ii. A. If standards for control of mercury emissions from coal-fired utility boilers pursuant to the Clean Air Act have not yet been adopted by USEPA or are not effective, such that the boilers must be subject to a case-by-case determination of MACT pursuant to Section 112(g) of the Clean Air Act, a boiler shall comply with one of the following requirements with respect to emissions of mercury:

I. A removal efficiency of 95 percent achieved without injection of activated carbon or other similar material specifically used to control emissions of mercury, comparing the emissions and the mercury contained in the coal supply (Permit Option A); or

II. Control by injection of powdered activated carbon or other material or a combination of materials specifically for control of mercury emissions to achieve the maximum practicable degree of mercury removal, as established in accordance with Attachment 4 (Permit Option B).

B. I. Compliance with Permit Option A shall be demonstrated by periodic testing and proper operation of a boiler consistent with other applicable requirements that relate to control of mercury (e.g., requirements applicable to PM and SO₂ emissions) as may be further developed, or revised in the CAAPP Permit issued for the plant. Compliance with Permit Option B shall be demonstrated by proper operation of a boiler and such other practices developed pursuant to Attachment 4 and the applicable State construction permit for the mercury control system. Notwithstanding the above, periods of startup, shutdown and malfunction shall be addressed by the Startup, Shutdown and Malfunction Plan as provided by 40 CFR Part 63, Subpart A. (Refer to Condition 1.4.).

II. These Permit Options shall take effect 12 months after initial startup of an affected boiler, provided however, the Permittee may, upon written notice to the Illinois EPA, extend this period for up to an additional 12 months if needed for detailed evaluation of mercury emissions from the boilers or physical changes to the boilers related to control of mercury emissions. As part of this notice, the Permittee shall explain why the necessary evaluation of emissions or physical changes to the boilers could not reasonably be completed earlier, identify the activities that it
intends to perform to evaluate emissions or further enhance control for emissions, and specify the particular practices it will use during this period as good air pollution control practices to minimize emissions of mercury. Prior to this, the Permittee shall use good air pollution control practices to minimize emissions of mercury.

Note: In conjunction with either Compliance Option, the Permittee shall also conduct continuous emissions monitoring on a continuous or semi-continuous basis for the emissions of mercury from each boiler. (Refer to Condition 2.1.9-2.)

d. i. The boilers shall each comply with the requirements for control of hydrogen chloride emissions established by USEPA pursuant to the Clean Air Act, once applicable regulations are adopted by USEPA.

ii. A. If such standards are not adopted by USEPA or are not effective, such that the boilers must be subject to a case-by-case determination of MACT pursuant to Section 112(g) of the Clean Air Act, a boiler shall comply with one of the following requirements with respect to emissions of hydrogen chloride:

I. An emission rate of 0.0032 lb/million Btu, 3-hour average (Permit Option A); or

II. A removal efficiency of 98 percent, 3-hour average, comparing the emissions and the chlorine content of the fuel supply, expressed as equivalent hydrogen chloride (Permit Option B).

B. Compliance with Permit Options shall be demonstrated by periodic testing and proper operation of a boiler consistent with other applicable requirements that relate to control of SO\textsubscript{2} emissions, as may be further developed or revised in the CAAPP Permit issued for the plant. Notwithstanding the above, periods of startup, shutdown and malfunction shall be addressed by the Startup, Shutdown and Malfunction Plan as provided by 40 CFR Part 63, Subpart A. (Refer to Condition 1.4.)

C. These Permit Options shall take effect 12 months after initial startup of a boiler. Prior to such date, the Permittee shall use good air pollution control practices to minimize emissions of hydrogen chloride.
e. The Permittee shall use good air pollution control practices to minimize emissions during startup, shutdown and malfunction of a boiler as further addressed in Condition 2.1.6, including the following:

i. Use of natural gas during startup to heat the boiler prior to initiating firing of coal;

ii. Operation of the boiler and associated air pollution control equipment in accordance with written operating procedures that include Startup, Shutdown and Malfunction Plan(s) (See also Condition 1.4); and

iii. Inspection, maintenance and repair of the boiler and associated air pollution control equipment in accordance with written maintenance procedures.

Note: These requirements are applicable for emissions of SO₂, NOₓ and CO, for which continuous emissions monitoring is performed and the numerical limits in Condition 2.1.2(b) address emissions during startup, shutdown and malfunction, as well as for emissions of PM, VOM and other pollutants, for which continuous emissions monitoring is not performed and the numerical limits in Condition 2.1.2(b) and (c) do not apply during startup, shutdown and malfunction. For PM, VOM, sulfuric acid mist and fluorides (for which the numerical limits in Condition 2.1.2(b) and (c) do not apply during startup, shutdown and malfunction), the lb/hour limits, 3-hour average, in Condition 2.1.7(a) [Attachment 1: Table 1], which continue to apply during such periods, shall serve as “secondary limits” for purposes of BACT, with compliance determined based on engineering analysis and calculations.

2.1.3 Applicable Federal Emission Standards

a. i. The boilers are subject to a New Source Performance Standard (NSPS) for Electric Utility Steam Generating Units, 40 CFR 60, Subparts A and Da. The Illinois EPA administers NSPS in Illinois on behalf of the USEPA under a delegation agreement.

ii. The emissions from each boiler shall not exceed the applicable limits pursuant to the NSPS. In particular, the NOₓ emissions from each boiler shall not exceed 1.6 lb/MW-hr gross energy output, based on a 30-day rolling average, pursuant to 40 CFR 60.44a(d).

iii. The particulate matter emissions from each boiler shall not exceed 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity pursuant to 40 CFR 60.42a(b).
b. At all times, the Permittee shall maintain and operate each boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).

2.1.4 Applicable State Emission Standards

Each boiler is subject to the following state emission standards.

a. Opacity – 35 IAC 212.122 (20 percent opacity)
b. Particulate matter – 35 IAC 212.201 (0.1 lb/million Btu)*
c. Sulfur dioxide – 35 IAC 214.121 (1.2 lb/million Btu)*
d. Carbon monoxide – 35 IAC 216.121 (200 ppm, @ 50 % excess air)*
e. Nitrogen oxides – 35 IAC 217.121 (0.7 lb/million Btu)*

* This standard is not as stringent as the requirement in Condition 2.1.2.

2.1.5 Applicability of Other Regulations

a. Each boiler is an affected unit under the Acid Rain Deposition Control Program pursuant to Title IV of the Clean Air Act and is subject to certain control requirements and emissions monitoring, requirements pursuant to 40 CFR Parts 72, 73 and 75. (See also Condition 3.1 and Attachment 3)

b. The boilers will qualify as Electrical Generating Units (EGU) for purposes of 35 IAC Part 217, Subpart W, the NOx Trading Program for Electrical Generating Units. As EGU, the Permittee will have to hold NOx allowances for the NOx emissions of the boilers during each seasonal control period. (See also Condition 3.2)

c. For particulate matter, the boilers are pollutant-specific emissions units that will be subject to 40 CFR Part 64, Compliance Assurance Monitoring for Major Stationary Sources. As such, the application for Clean Air Act Permit Program (CAAPP) Permit for the source must include a Compliance Assurance Monitoring (CAM) plan for the boilers.

2.1.6 Operating Requirements

a. The Permittee shall operate each boiler and associated air pollution control equipment in accordance with good air pollution control practices to minimize emissions, by operating in accordance with detailed written operating procedures as it is safe to do so. These procedures at a minimum shall:

i. Address startup, normal operation, shutdown and malfunction events.
ii. Fulfill applicable requirements of Condition 1.4 for a Startup, Shutdown and Malfunction Plan, including detailed provisions for review of relevant operating parameters of the boiler systems during startup, shutdown and malfunction as necessary to make adjustments and corrections to reduce or eliminate any excess emissions.

iii. With respect to startup, address readily foreseeable startup scenarios, including so called “hot startups” when the operation of a boiler is only temporarily interrupted, and provide for appropriate review of the operational condition of a boiler prior to initiating startup of the boiler.

iv. A. With respect to malfunction, identify and address likely malfunction events with specific programs of corrective actions, and provide that upon occurrence of a malfunction that will result in emissions in excess of the applicable limits in Condition 2.1.2(b), 2.1.3 and 2.1.4, the Permittee shall, as soon as practicable, repair the affected equipment, reduce the operating rate of the boiler or remove the boiler from service so that excess emissions cease.

   B. Consistent with the above, if the Permittee has maintained and operated a boiler and associated air pollution control equipment so that malfunctions are infrequent, sudden, not caused by poor maintenance or careless operation, and in general are not reasonably preventable, the Permittee shall begin shutdown of the boiler within 90 minutes, unless the malfunction is expected to be repaired within 120 minutes or such shutdown could threaten the stability of the regional electrical power supply. In such case, shutdown of the system shall be undertaken when it is apparent that repair will not be accomplished within 120 minutes or shutdown will not endanger the regional power system. In no case shall shutdown of the boiler be delayed solely for the economic benefit of the Permittee.

Note: If the Permittee determines that the continuous emission monitoring system (CEMS) is inaccurately reporting excess emissions, the boiler may continue to operate provided the Permittee records the information it is relying upon to conclude that the boiler and associated emission control systems are functioning properly and the CEMS is reporting inaccurate data and the Permittee takes prompt action to resolve the accuracy of the CEMS.

b. The Permittee shall maintain each boiler and associated air pollution control equipment in accordance with good air pollution control practices to assure proper functioning of equipment and minimize malfunctions, including maintaining the boiler in accordance with written procedures developed for this purpose.
c. The Permittee shall handle the fuel for the boilers in accordance with a written Fuel Management Plan that shall be designed to provide the boilers with a consistent fuel supply that meets relevant criteria needed for proper operation of the boilers and their control systems.

d. The Permittee shall review its operating and maintenance procedures and its Fuel Management Plan for the boilers as required above on a regular basis and revise them if needed consistent with good air pollution control practices based on actual operating experience and equipment performance. This review shall occur at least annually if not otherwise initiated by occurrence of a startup, shakedown, or malfunction event that is not adequately addressed by the existing plans or a specific request by the Illinois EPA for such review.

2.1.7 Emission Limitations

a. i. Emissions from the boilers shall not exceed the limits in Attachment 1, Table I. The limits in Table I are generally based upon the emission rates and the maximum firing rate specified in the permit application consistent with the air quality analysis submitted by the Permittee pursuant to PSD.

ii. Effective 12 months after completion of the initial performance tests or 24 months after initial startup of the boiler, whichever occurs first, SO\textsubscript{2} emissions from the boiler shall not exceed 2,450 lb/hour, daily average.

iii. A. For hourly limitations for which compliance is to be determined on a 24-hour average basis, continuous emission monitoring is required for the pollutant (see Condition 2.1.9). Monitoring data shall be compiled on a calendar day basis to determine compliance, except for NO\textsubscript{x} and CO for a calendar day in which a startup or shutdown of a boiler occurred as addressed by Condition 2.1.6(a) for which monitoring data shall be compiled for the 24-hour period following or preceding such event, as appropriate.

B. For hourly limitations for which compliance is to be determined on a 3-hour average basis, emission testing is required for the pollutant (see Condition 2.1.8). When compliance is determined from such testing, the results of such testing shall be compiled as the average of the individual test runs to determine compliance, as provided by 35 IAC Part 283.

b. i. The SO\textsubscript{2} emissions from the boilers shall comply with a lower hourly limit, pursuant to an evaluation conducted in accordance with Condition 2.1.16.
ii. The SO$_2$ emissions from the coal-fired boilers, in total, in the initial years of operation of the plant through calendar year 2009 shall not exceed 10,679 tons and in calendar year 2010 shall not exceed 11,273 tons.

Note: The above limits on daily and annual SO$_2$ emissions in Conditions 2.1.7(a)(ii) and (b)(ii) reflect commitments made by the Permittee to the USFWS in response to concerns expressed by the USWFS about the impact of the plant on Air Quality Related Values in the Wilderness Area in the Mingo Wildlife Refuge in southeastern Missouri.

2.1.8 Emission Testing

a. i. A. Within 60 days after achieving the maximum production rate at which a boiler will be operated but not later than 180 days after initial startup of each boiler, the Permittee shall have tests conducted for opacity and emissions of NO$_x$, CO, PM, VOM, SO$_2$, hydrogen chloride, hydrogen fluoride, sulfuric acid mist, and mercury and other metals, as follows, at its expense by an approved testing service while the boiler is operating at maximum operating load and other representative operating conditions. (In addition, the Permittee may also perform measurements to evaluate emissions at other load and operating conditions.)

B. This period of time may be extended by the Illinois EPA for up to an additional 365 days upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties in the startup and testing of the boiler, provided that initial performance testing required by the NSPS, 40 CFR Part 60, Subpart Da, has been completed for the boiler and the test report submitted to the Illinois EPA.

ii. Between 9 and 15 months after performance of the initial testing that demonstrates compliance with applicable requirements, the Permittee shall have the emissions of PM, VOM, hydrogen chloride, hydrogen fluoride, sulfuric acid mist, and mercury and other metals from each affected boiler retested as specified above.

iii. The Permittee shall conduct additional tests for PM emissions as needed for purposes of the evaluation of condensable PM$_{10}$ emissions required by Condition 2.1.17.

iv. A. Thereafter, the Permittee shall also test PM emissions from each boiler as provided below at a regular interval that is no greater than 30 months, except as follows. If the results of two of these PM tests consecutively for a boiler demonstrate PM
emissions that are two thirds or less than the applicable limits (e.g., 0.010 lb/mmBtu or less for PM, as compared to the limit of 0.015 lb/mmBtu), the maximum interval for PM testing of such boiler will be at least once every 48 months. However, if a PM test for such a boiler then shows PM emissions that are more than two thirds of an applicable limit, the maximum interval between testing shall revert to 30 months until two consecutive tests again show PM emissions that are two thirds or less than the applicable limits. For the purpose of these provisions, the two consecutive tests must be at least 24 months apart.

Note: The CAAPP Permit may establish requirements for more frequent emission testing.

B. Whenever PM testing for a boiler is performed as required above, testing for emissions of mercury and hydrogen chloride shall also be performed as provided below.

iv. In addition to the emission testing required above, the Permittee shall perform emission tests as provided below as requested by the Illinois EPA for a boiler within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA. Among other reasons, such testing may be required if there is a significant increase in the mercury or chlorine content of the fuel supply to the boilers.

Note: Specific requirements for periodic emission testing may be established in the CAAPP Permit for the plant.

v. Within two years of the initial startup of each affected boiler, the Permittee shall have emission testing conducted for dioxin/furan emissions as provided below.

b. The following methods and procedures shall be used for testing, unless other methods adopted by or being developed by USEPA are specified or approved by the Illinois EPA.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opacity</td>
<td>Method 9</td>
</tr>
<tr>
<td>Location of Sample Points</td>
<td>Method 1</td>
</tr>
<tr>
<td>Gas Flow and Velocity</td>
<td>Method 2</td>
</tr>
<tr>
<td>Flue Gas Weight</td>
<td>Method 3 or 3A</td>
</tr>
<tr>
<td>Moisture</td>
<td>Method 4</td>
</tr>
<tr>
<td>Particulate Matter(^1)</td>
<td>Method 5, or Methods 5 and Method 201 or 201A (40 CFR 51, Appendix M), with Method 19 as specified in 40 CFR 60.48a(b)</td>
</tr>
<tr>
<td>Condensable Particulate</td>
<td>Method 202(^2)</td>
</tr>
<tr>
<td>Emission Type</td>
<td>Method</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Nitrogen Oxides</td>
<td>Method 19, as specified in 40 CFR 60.48a(d)</td>
</tr>
<tr>
<td>Sulfur Dioxides</td>
<td>Method 19, as specified in 40 CFR 60.48a(c)</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>Method 10</td>
</tr>
<tr>
<td>Volatile Organic Material</td>
<td>Methods 18 and 25A</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>Method 26</td>
</tr>
<tr>
<td>Hydrogen Fluoride</td>
<td>Method 26</td>
</tr>
<tr>
<td>Sulfuric Acid Mist</td>
<td>Method 26</td>
</tr>
<tr>
<td>Metals</td>
<td>Method 29</td>
</tr>
<tr>
<td>Dioxin/Furan</td>
<td>Method 23</td>
</tr>
</tbody>
</table>

**Notes:**

1. The Permittee may report all PM emissions measured by USEPA Method 5 as PM$_{10}$, in which case separate testing using USEPA Method 201 or 201A need not be performed.

2. Notwithstanding the general requirement to use USEPA test methods, appropriate refinements or adaptations shall be made to the USEPA test methods or other established test methods may be used for testing, subject to review and approval by the Illinois EPA to facilitate accurate and reliable measurements given the composition of the exhaust. In particular, adaptations shall be made to USEPA Method 202, to prevent positive bias from conversion of sulfur dioxide to sulfuric acid in the impingers, for example, by additional purges or separate, simultaneous measurements of the sulfuric acid emissions.

3. Emission testing shall be conducted for purposes of certification of the continuous emission monitors required by Condition 2.1.9. Thereafter, the NO$_x$, SO$_2$ and CO emission data from certified monitors may be provided in lieu of conducting emissions tests.

4. The Permittee may exclude methane, ethane and other exempt compounds from the results of any VOM test provided that the test protocol to quantify and correct for any such compounds is included in the test plan approved by the Illinois EPA.

5. For purposes of this permit, metals are defined as mercury, arsenic, beryllium, cadmium, chromium, lead, manganese, and nickel.

6. During the initial emissions testing for metals, the Permittee shall also conduct measurements using established test methods for the principle forms of mercury present in the emissions, i.e., particle bound mercury, oxidized mercury and elemental mercury.
c.  i.  Test plans, test notifications, and test reports shall be submitted to the Illinois EPA in accordance with the Condition 4.2.

ii.  In addition to other information required in a test report, test reports shall include detailed information on the operating conditions of a boiler during testing, including:

A.  Fuel consumption (in tons);

B.  Composition of fuel (Refer to Condition 2.1.10(b)), including the metals, chlorine and fluorine content, expressed in pound per million Btu;

C.  Firing rate (million Btu/hr) and other significant operating parameters of the boiler, including temperature of the flue gas entering the SCR;

D.  Control device operating rates or parameter, e.g., SCR reagent injection rate, ESP voltages and current flows, WFGD pressure drop and reagent addition rate, WESP voltages current flows, and water flow rate;

E.  Opacity of the exhaust from the boiler, 6-minute averages and 1-hour averages;

F.  Turbine/Generator output rate (MW gross).

2.1.9-1 Emissions Monitoring – SO₂, NOₓ, CO and Opacity

a.  i.  The Permittee shall install, certify, operate, calibrate, and maintain continuous monitoring systems on each boiler for opacity, emissions of SO₂, NOₓ and CO, and either oxygen or carbon dioxide in the exhaust. The opacity monitor shall be located before the wet control equipment as needed to prevent interference from moisture in the ductwork.

ii.  The Permittee shall also operate and maintain these emissions monitoring systems according to site-specific monitoring plan(s), which shall be submitted at least 60 days before the initial startup of a boiler to the Illinois EPA for review and comment. With this submission, the Permittee shall submit the proposed type of monitoring equipment and proposed sampling location(s), which shall be approved by the Illinois EPA prior to installation of equipment.

iii.  The Permittee shall fulfill the applicable requirements for monitoring in the NSPS, 40 CFR 60.13, 60.47a, and 40 CFR 60 Appendix B, the federal Acid Rain Program, 40 CFR Part 75; 35 IAC Part 217, Subpart W, the NOₓ Trading Program for Electrical Generating Units; and NESHAP 40 CFR 63.8 and 63.10. These rules require that the Permittee maintain detailed records for both the measurements made by these systems and the maintenance, calibration and operational activity associated with the monitoring systems.
b. In addition, when NOₓ or SO₂ emission data are not obtained from a continuous monitoring system because of system breakdowns, repairs, calibration checks and zero span adjustments, emission data shall be obtained by using standby monitoring systems, emission testing using appropriate USEPA Reference Methods, or other approved methods as necessary to provide emission data for a minimum of 75 percent of the operating hours in a boiler operating day, in at least 22 out of 30 successive boiler operating days, pursuant to 40 CFR 60.47a(f) and (h).

Note: Fulfillment of the above criteria for availability of emission data from a monitoring system does not shield the Permittee from potential enforcement for failure to properly maintain and operate the system.

c. Compliance with the most stringent emission monitoring requirements for a pollutant is sufficient to demonstrate compliance with all emission monitoring requirements for that pollutant.

2.1.9-2 Emissions Monitoring - Mercury

a. If the boilers are subject to Condition 2.1.2(c)(ii), the Permittee shall install, operate and maintain a continuous or semi-continuous monitoring system to measure the mercury emissions of each boiler using monitoring methodology and procedures developed, proposed or adopted by USEPA for monitoring of mercury emissions from coal-fired utility boilers, such as the monitoring and measurement method proposed by USEPA as USEPA Method 324 (40 CFR Part 63, Appendix B, Method 324).

Note: If the boilers are subject to Condition 2.1.2(c)(i), the Permittee will be subject to the monitoring requirements for mercury emissions set by the applicable USEPA regulations.

b. The Permittee shall keep logs for the operation, calibration and maintenance of these monitoring systems.

2.1.10 Operational Monitoring and Measurements

a. The Permittee shall install, evaluate, operate, and maintain meters to measure and record consumption of natural gas by each boiler.

b. i. The Permittee shall sample and analyze the sulfur and heat content of the coal supplied to the boilers in accordance with USEPA Reference Method 19 (40 CFR 60, Appendix A, Method 19).

ii. The Permittee shall analyze samples of all coal supplies that are components of the coal supply to the boilers and the coal supply, itself, for mercury and other metals and chlorine content, as follows:
A. Analysis shall be conducted in accordance with USEPA Reference Methods or other method approved by USEPA.

B. Analysis of the fuel supply to the boiler, itself, shall be conducted in conjunction with performance testing of a boiler.

C. Analysis of representative samples of coal shall be conducted in conjunction with acceptance of coal from off-site.

D. Analysis of representative samples of coal shall be conducted at least every two years, if a more frequent analysis is not needed pursuant to the above requirements.

c. i. The Permittee shall install, operate and maintain systems to measure key operating parameters of the control system for each boiler, including:

A. Reagent injection rate for the SCR unit;

B. Voltages, currents and sparking rates for the ESP;

C. Reagent usage rate for the WFGD; and

D. Voltages, currents, sparking rates and water flow for the WESP.

ii. The Permittee shall maintain the records of the measurements made by these systems and records of maintenance and operational activity associated with the systems.

d. i. The Permittee shall install and operate a particulate matter continuous monitoring system on each boiler for the purpose of compliance assurance monitoring. The PM continuous monitoring system shall monitor PM concentration downstream of the WESP; provided, however, with approval of the Illinois EPA it may be shifted to upstream of the WFGD if it is demonstrated within six months of operation that the device cannot be reliably operated following a wet control device.

ii. The Permittee shall operate, calibrate and maintain each such system in accordance with the applicable USEPA performance specification and other applicable requirements of the NSPS for monitoring systems and in a manner that is generally consistent with published USEPA guidance for use of such systems for compliance assurance monitoring.

iii. The Permittee shall also operate and maintain these monitoring systems according to a site-specific monitoring
plan, which shall be submitted at least 60 days before the initial startup of a boiler to the Illinois EPA for its review and comment. With this submission, the Permittee shall submit the proposed type of monitoring equipment and proposed sampling location, which shall be approved by the Illinois EPA prior to installation of equipment.

2.1.11 Recordkeeping

a. The Permittee shall maintain the following records with respect to operation and maintenance of each boiler and associated control equipment:

i. An operating log for the boiler that at a minimum shall address:

A. Each startup of the boiler, including the nature of the startup, sequence and timing of major steps in the startup, any unusual occurrences during the startup, and any deviations from the established startup procedures, with explanation;

B. Each shutdown of the boiler, including the nature and reason for the shutdown, sequence and timing of major steps in the shutdown, any unusual occurrences during the shutdown, and any deviations from the established shutdown procedures, with explanation; and

C. Each malfunction of the boiler system that significantly impairs emission performance, including the nature and duration of the event, sequence and timing of major steps in the malfunction, corrective actions taken, any deviations from the established procedures for such a malfunction, and preventative actions taken to address similar events.

ii. Inspection, maintenance and repair log(s) for the boiler system that, at a minimum, shall identify such activities that are performed related to components that may effect emissions; the reason for such activities, i.e., whether planned or initiated due to a specific event or condition; and any failure to carry out the established maintenance procedures, with explanation.

iii. Copies of the steam charts and daily records of steam and electricity generation.

b. The Permittee shall maintain records of the following items related to fuels used in the boilers:

i. Records of the sampling and analysis of coal supply to the boilers conducted in accordance with Condition 2.1.10(b).
ii. A. The sulfur content of coal, lb sulfur/million Btu, supplied to the boilers, as determined pursuant to Condition 2.1.10(b)(i); and

B. The sulfur content of coal supplied to the boilers on a 30-day rolling average, determined from the above data.

iii. The amount of fuel combusted in each boiler by type of fuel as specified in 40 CFR Part 60, Appendix A, Method 19.

c. For each boiler, the Permittee shall maintain records of the following items related to emissions:

i. Records of SO₂, NOₓ and PM emissions and operation for each boiler-operating day, as specified by 40 CFR 60.49a.

ii. A. With respect to the SO₂ reduction-based standard in 40 CFR 60.43a(a)(1), for each 30 day averaging period, the SO₂ emissions in lb/million Btu and the required SO₂ emission rate as determined by applying the permissible emission fraction to the potential SO₂ emission rate of the coal supply.

B. With respect to the SO₂ reduction in Condition 2.1.2(b)(ii)(B), for each 12 month period once this requirement takes effect, the actual SO₂ emissions, the theoretical “uncontrolled” SO₂ emissions, and the level of SO₂ control achieved.

iii. Records of CO emissions of the boiler based on the continuous emissions monitoring system required by Condition 2.1.9.

iv. Records of emissions of VOM, mercury and other pollutants from the boiler, based on fuel usage and other operating data for the boiler and appropriate emission factors, with supporting documentation.

d. The Permittee shall record the following information for any period during which a boiler deviated from an applicable requirement:

i. Each period during which an affected unit exceeded the requirements of this permit, including applicable emission limits, which records shall include at least the information specified by Condition 4.3.

ii. Each period during which opacity of a boiler exceeded the level of opacity at which emission testing has demonstrated that the boiler would comply with particulate matter emission limits.
2.1.12 Notifications

a. The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements that are not addressed by the regular reporting required pursuant to Condition 2.1.13. These notifications shall include the information specified by Condition 4.5.

2.1.13 Reporting

a. i. The Permittee shall fulfill applicable reporting requirements in the NSPS, 40 CFR 60.7(c) and 60.49a, for each boiler. For this purpose, quarterly reports shall be submitted to the Illinois EPA no later than 30 days after the end of each calendar quarter. (40 CFR 60.49a (i))

ii. In lieu of submittal of paper reports, the Permittee may submit electronic quarterly reports for SO$_2$ and/or NO$_x$ and/or opacity. The electronic reports shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement indicating whether compliance with applicable emission standards and minimum data requirements of 40 CFR 60.49a were achieved during the reporting period. (40 CFR 60.49a(j))

b. i. Either as part of the periodic NSPS report or accompanying such report, the Permittee shall report to the Illinois EPA any and all opacity and emission measurements for a boiler that are in excess of the respective requirements set by this permit. These reports shall provide for each such incident, the pollutant emission rate, the date and duration of the incident, and whether it occurred during startup, malfunction, breakdown, or shutdown. If an incident occurred during malfunction or breakdown, the corrective actions and actions taken to prevent or minimize future reoccurrences shall also be reported. (40 CFR 60.7(c))

ii. These reports shall also address any deviations from applicable compliance procedures for a boiler established by this permit, including specifying periods during which the continuous monitoring systems were not in operation.

c. The Permittee shall comply with applicable reporting requirements under the Acid Rain Program, with a single copy of such report sent to Illinois EPA, Division of Air Pollution Control Compliance Section.

2.1.14 Operational Flexibility/Anticipated Operating Scenarios

a. The Permittee is authorized to use coal from off-site in the boilers, subject to the restrictions in Condition 1.3, without revision of this permit.
b. This condition does not affect the Permittee’s obligation to continue to comply with applicable requirements or to properly obtain a State construction permit in a timely manner for any activity involving the boiler or the fuel handling equipment that constitutes construction or modification of an emission unit, as defined in 35 IAC 201.102, or that entails receiving of coal by rail or truck. (See also Condition 1.3)

2.1.15 Construction of Additional Control Measures

a. The Permittee is generally authorized under this permit to construct and operate additional devices and features to control emissions from a boiler, which are not described in the application for this permit, as follows. This condition does not affect the Permittee’s obligation to comply with the applicable requirements for the boilers.

b. This authorization only extends to devices or features such as sorbent injection systems that are designed to reduce emissions that are identified during the detailed design of the boilers and any refinements to that design that occur during construction and the initial operation of the boilers. These measures may also serve to improve boiler operation as they reduce consumption of materials, but do not include measures that would increase a boiler’s rated heat input capacity.

c. Prior to beginning actual construction of any such device or feature, the Permittee shall apply for and obtain a separate State construction permit for it from the Illinois EPA pursuant to 35 IAC Part 201, Subpart D.

2.1.16 Optimization of Daily Control of SO2 Emissions

a. i. The Permittee shall evaluate SO2 emissions from the boilers to determine whether a lower hourly limit may be reliably achieved by the SO2 control system on a daily basis without unacceptable consequences, i.e., inability to comply with other emission limits or requirements, or significant risk to equipment or personnel, and without unreasonable consequences, i.e., a significant increase in actual particulate matter emissions from the boilers or a substantial increase in maintenance and repair needed for the boilers.

ii. A. If the Permittee fails to complete the evaluation or submit the required report in a timely manner as specified by Condition 2.1.16(b), the hourly SO2 emission limit in Condition 2.1.7(a)(i) shall automatically become 1,350 lb/hour, daily average, not to be exceeded more than one day per month, annual average.

Note: This limit is based on the nominal capacity of each boiler and the SO2 emission rate set as BACT, i.e., 0.182 lb/million Btu.
B. This permit will be revised to set lower limit(s) for SO₂ emissions (but no lower than the above default limit), if the Illinois EPA, after considering the results of any evaluation performed by the Permittee, finds that the boilers can and should be able to consistently comply with such limit(s) without unacceptable or unreasonable consequences. Additional factors, e.g., the load of the boiler, may be included in such limits to address specific modes of operation during which a particular limit may or may not be achievable.

b. The Permittee shall perform this evaluation of SO₂ emissions in accordance with a plan submitted to the Illinois EPA for review and comment. The initial plan shall be submitted to the Illinois EPA no later than 180 days after initial start-up of a boiler.

The plan shall provide for systematic evaluation of change or variation, within the normal or feasible range of operation, in the following as related to the monitored SO₂ emissions:

i. Sulfur content of the fuel supply;

ii. Boiler operating load and combustion settings, including excess oxygen;

iii. Levels of uncontrolled SO₂ and NOₓ before the control devices, as predicted from fuel composition and operating data;

iv. Operating temperature and reagent injection rates for the SCR system;

v. Levels of uncontrolled sulfuric acid mist after the SCR, as predicted from operating data;

vi. Operating parameters of the electrostatic precipitator (ESP);

vii. Operating data and limestone usage rates for the scrubber;

viii. Operating parameters of the wet electrostatic precipitator (WESP); and

ix. Opacity, PM, NOₓ, and sulfuric acid mist emissions.

c. i. The Permittee shall promptly begin this evaluation after a boiler demonstrates compliance with all applicable short-term emission limits as shown by emission testing and monitoring.
ii. With the final report for such compliance demonstration, the Permittee shall submit an update to the plan that describes its findings with respect to control of SO₂ emissions during the shakedown of the boilers as it highlights possible areas of concern for the detailed evaluation.

d. i. This evaluation shall be completed and a detailed written report submitted to the Illinois EPA within three years after the initial startup of a boiler. This report shall include proposed alternative limit(s) for SO₂ emissions.

ii. This deadline may be extended by the Illinois EPA for an additional year if the Permittee submits an interim report demonstrating the need for additional time to effectively evaluate SO₂ emissions.

2.1.17 Revision of Total PM₁₀ Emission Limit Based on Results of Emission Testing

a. i. The emission limit for PM₁₀ in Condition 2.1.2(b)(i)(B) shall be lowered based on the results of emissions testing unless the Permittee demonstrates and the Illinois EPA concurs, based on an evaluation as provided by Condition 2.1.17, that a lower limit cannot be reliably met without unacceptable consequences, i.e., inability to comply with other emission limits or requirements or significant risk to equipment or personnel, and without unreasonable consequences, i.e., a significant increase in maintenance and repair needed for the boilers. For this purpose, the Permittee shall conduct at least four additional emission tests beyond the initial performance test (total of at least five tests) spread out during the period in which the evaluation is being performed.

ii. A. If the Permittee fails to perform the necessary emission testing for evaluation of PM₁₀ emissions, the limit for PM₁₀ shall automatically be lowered to 0.018 lb/million Btu.

B. If the Permittee fails to complete the evaluation in a timely manner in accordance with Condition 2.1.17(b), the limit for PM₁₀ shall automatically be lowered to the greater of (1) 0.018 lb/million Btu or (2) the sum of the average of the results from the required periodic compliance tests (excluding any tests showing noncompliance and any test results that do not reflect representative operating conditions or otherwise reflect outlying data) and the standard deviation of such results, rounded to two significant digits. (If the statistical evaluation of test results yields a value greater than 0.035 lb/million Btu, i.e., the limit in Condition 2.1.2(b), the limit shall remain at 0.035 lb/million Btu.)
iii. This permit will be revised to set lower limit(s) for PM$_{10}$ emissions (but no lower than the above default limits), if the Illinois EPA, after considering the result of any evaluation performed by the Permittee, finds that the boilers can and should be able to consistently comply with such limit(s) without unreasonable consequences.

b. i. If the Permittee elects to perform an evaluation for PM$_{10}$ emissions, the evaluation shall be performed in accordance with a plan submitted to the Illinois EPA for review and comment. The plan shall provide for evaluation of PM$_{10}$ emissions at moderate load operation of the boiler as well as operation at full load. The initial plan shall be submitted to the Illinois EPA no later than 180 days after initial start-up of a boiler.

ii. A. This evaluation shall be completed and a detailed written report submitted to the Illinois EPA within three years after the initial startup of a boiler. This report shall include proposed alternative limit(s) for PM$_{10}$ emissions.

B. This deadline may be extended for an additional year if the Permittee submits an interim report demonstrating the need for additional data to effectively set a revised limit for PM$_{10}$ emissions. During this year, at least two more performance tests for PM$_{10}$ emissions shall be conducted.
CONDITION 2.2: UNIT-SPECIFIC CONDITIONS FOR FUEL AND OTHER BULK MATERIAL HANDLING, PROCESSING AND STORAGE OPERATIONS

2.2.1 Description of Emission Units

The affected units for the purpose of these unit-specific permit conditions are operations that handle coal and other materials in bulk that are involved with the operation of the power plant (including the mine facility) and have the potential for particulate matter emissions, including coal, rock, limestone, and ash. Affected units include receiving, transfer, handling, storage, processing or preparation (crushing, etc.) and loading operations for such materials.

2.2.2 Control Technology Determination

a. Emissions of particulate matter from affected units, other than storage piles, including associated material handling operations, coal-handling operations at the mine facility, and the transfer belt between the mine facility and the power plant facility, shall be controlled with enclosures and aspiration to baghouses or other filtration devices. These control devices shall be operated in accordance with good air pollution control practices to minimize emissions.

b. There shall be no visible fugitive emissions, as defined by 40 CFR 60.671, from storage buildings unless such emissions comply with the requirements of Condition 2.2.3(a).

c. i. Coal handling operations at the mine facility, other than associated with storage piles, and the transfer belt between the mine facility and the power plant facility shall be controlled by enclosure or covers and fogging, material quality, or application of water or other dust suppressants so as to minimize fugitive emissions to the extent practicable.

ii. For this purpose, for each affected unit, either (1) there shall be no visible emissions from the affected unit, as determined in accordance with USEPA Method 22, or (2) a nominal control efficiency for particulate matter emissions of at least 99 percent shall be achieved from the uncontrolled emission rate, as determined using appropriate USEPA emission factors for uncontrolled particulate emissions and engineering analysis and calculations.

d. i. Storage piles, including material handling operations associated with the piles, shall be controlled by application of water or other dust suppressants so as to minimize fugitive emissions to the extent practicable.

ii. A. For this purpose, except for limestone, a nominal control efficiency of at least 90 percent shall be achieved from the uncontrolled emission rate, as determined using appropriate USEPA emission factors for uncontrolled particulate emissions and engineering analysis and calculations.
B. For limestone, (1) a nominal control efficiency of at least 99 percent shall be achieved, or (2) there shall be no visible emissions from the affected unit, as determined in accordance with USEPA Method 22.

2.2.3 Applicable Federal Emission Standards

a. Affected units engaged in handling limestone shall comply with applicable requirements of the NSPS for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart 000 and related provisions of 40 CFR 60, Subpart A.

i. Pursuant to the NSPS, stack emissions of particulate matter are subject to the following limitations:

A. The rate of emissions shall not exceed 0.05 gram/dscm (0.02 gr/dscf). (40 CFR 60.672(a)(1))

B. The opacity of emissions shall not exceed 7 percent. (40 CFR 60.672(a)(2))

ii. Pursuant to the NSPS, fugitive emissions of particulate matter are subject to the following limitations:

A. The opacity of emissions from grinding mills, screens, (except truck dumping) storage bins, and enclosed truck or railcar loading operations shall not exceed 10 percent. (40 CFR 60.672(b) and (d))

B. The opacity of emissions from crushers shall not exceed 10 percent. (40 CFR 60.672(b))

C. Truck dumping into any screening operation, feed hopper, or crusher is exempt from the above standards. (40 CFR 60.672(d))

b. Affected units engaged in handling and processing coal shall comply with applicable requirements of the NSPS for Coal Preparation Plants, 40 CFR 60, Subpart Y, and related provisions of 40 CFR 60, Subpart A.

Pursuant to the NSPS, the opacity of the exhaust from coal processing and conveying equipment, coal storage systems (other than open storage piles), and coal loading systems shall not exceed 20 percent (40 CFR 60.252(c)).

c. At all times, the Permittee shall maintain and operate affected units that are subject to NSPS, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).
2.2.4 Applicable State Emission Standards

a. The emission of smoke or other particulate matter from affected units shall not have an opacity greater than 30 percent, except as allowed by 35 IAC 212.124. Compliance with this limit shall be determined by 6-minute averages of opacity measurements in accordance with USEPA Reference Method 9. [35 IAC 212.109 and 212.123(a)]

b. With respect to emissions of fugitive particulate matter, affected units shall comply with 35 IAC 212.301, which provides that visible emissions of fugitive particulate matter shall not be visible from any process, including any material handling or storage activity, when looking generally toward the zenith at a point beyond the property line of the source, except when the wind speed exceeds 25 miles per hour, as provided by 35 IAC 212.314.

c. The emissions of particulate matter from affected units other than units excluded by 35 IAC 212.323 (refer to Condition 2.2.5(a)) shall comply with the applicable limit pursuant to 35 IAC 212.321, which rule limits emissions based on the process weight rate of emission units and allows a minimum emission rate of 0.55 lb/hour for any individual unit.

2.2.5 Applicability of Other Regulations

This permit is issued based on the coal piles and associated operations, coal handling operations at the mine facility, and the transfer belt between the mine facility and the power plant facility not being subject to 35 IAC 212.321 pursuant to 35 IAC 212.323, which provides that 35 IAC 212.321 shall not apply to emission units, such as stock piles, to which, because of the disperse nature of such emission units, such rules cannot reasonably be applied.

2.2.6 Operating Requirements

a. i. The power plant facility shall be designed and operated to store bulk materials that have the potential for particulate matter emissions, other than coal, limestone, wetted bottom ash and scrubber sludge, in silos, bins, and buildings, without storage of such material in outdoor piles except on a temporary basis during breakdown or other disruption in the capabilities of the enclosed storage facilities.

ii. Outdoor coal piles shall be equipped and operated with adjustable stacker(s), rotary stacker(s), ladders or other comparable devices to minimize the distance that material drops when added to the pile and minimize the associated particulate matter emissions.
b. i. The Permittee shall carry out control of fugitive particulate matter emissions from affected units in accordance with a written operating program describing the measures being implemented in accordance with Conditions 2.2.2 and 2.2.6(a) to control emissions at each area of the plant with the potential to generate more than trivial amounts of such emissions, which program shall be kept current.

A. This program shall include maps or diagrams indicating the location of affected units with the potential for fugitive emissions, accompanied by the following information for each such unit: a general description of the unit, its size (area or volume), the expected level of activity, the nature and extent of enclosure, and a description of installed air pollution control equipment.

B. This program shall include a detailed description of any additional emission control techniques (e.g., water or surfactant spray) including: typical flow of water and additive concentration; rate or normal frequency at which measures would be implemented; circumstances in which the measures would not be implemented e.g., adequate surface moisture on material; triggers for additional control, e.g. observation of 10 percent or greater opacity; and calculated control efficiency.

ii. The Permittee shall submit copies of this operating program to the Illinois EPA for review as follows:

A. A program for the construction of the plant shall be submitted within 30 days of beginning actual construction of the source.

B. The initial operating program for the plant shall be submitted within 90 days of initial start up of the plant.

C. Significant amendments to the program by the Permittee shall be submitted within 30 days.

iii. A revised operating program shall be submitted to the Illinois EPA for review within 90 days of a request from the Illinois EPA for revision to address observed deficiencies in control of fugitive emissions.

c. The Permittee shall conduct inspections of affected units on at least a monthly basis with personnel not directly responsible for the day-to-day operation of these units, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented. When the plant
begins to handle bulk materials in the affected units, these inspections shall include observation for the presence of visible emissions, performed in accordance with USEPA Method 22, from buildings and structures in which affected units are located and from units from which the Permittee has elected to demonstrate no visible emissions.

2.2.7 Emission Limitations

Emissions from affected units shall not exceed the limitations in Attachment 1, Table II and the limitations specified in the records required by Condition 2.2.11(a).

2.2.8 Emission Testing

a. i. A. Within 60 days after achieving the maximum production rate at which an affected emission unit subject to NSPS will be operated, but not later than 180 days after initial startup of each such unit, the Permittee shall have emissions tests conducted at its expense as follows below by an approved testing service under unit operating conditions that are representative of maximum emissions.

B. This period of time may be extended by the Illinois EPA upon written request by the Permittee as needed to reasonably accommodate unforeseen difficulties in the startup and testing of an affected unit, provided that initial emissions testing required by the NSPS has been completed for the unit and the test report has been submitted to the Illinois EPA.

ii. In addition to the initial emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA for an affected unit within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. The following methods and procedures shall be used for emission testing:

i. The following USEPA methods and procedures shall be used for particulate matter and opacity measurements for the affected units subject to 40 CFR Part 60, Subpart OOO, as specified in 40 CFR 60.675:

   Particulate Matter   Method 5 or 17
   Opacity            Method 9

ii. The following USEPA methods and procedures shall be used for particulate matter and opacity measurements for the affected units subject to 40 CFR 60, Subpart Y, as specified in 40 CFR 60.254:
Particulate matter - Method 5, the sampling time and sample volume for each run shall be at least 60 minutes and 30 dscf. Sampling shall begin no less than 30 minutes after startup and shall terminate before shutdown procedures begin.

Opacity - Method 9, opacity measurements shall be performed by a certified observer.

c. Test plan(s), test notifications, and test reports shall be submitted to the Illinois EPA in accordance with Condition 4.2.

2.2.9 Operational Monitoring and Measurements

a. The Permittee shall install, operate and maintain systems to measure the pressure drop across each baghouse used to control affected units.

Note: This requirement does not apply to bin vent filters and other similar filtration devices.

b. The Permittee shall maintain the records of the measurements made by these systems and records of maintenance and operational activity associated with the systems.

2.2.10 Emissions Monitoring

None

2.2.11 Recordkeeping

a. The Permittee shall maintain files, which shall be kept current, that contain:

i. A. For the baghouses or other filter devices associated with affected units, design specifications for each device (type of unit, maximum design exhaust flow (acfm or scfm), filter area, type of filter cleaning, performance guarantee for particulate exhaust loading in gr/scf, etc.), the manufacturer’s recommended operating and maintenance procedures for the device, and design specification for the filter material in each device (type of material, surface treatment(s) applied to material, weight, performance guarantee, warranty provisions, etc.).

B. For each baghouse, the normal range of pressure drop across the device and the minimum and maximum safe pressure drop for the device, with supporting documentation.

ii. For affected units that are not controlled with baghouses or other filter devices, a detailed description of the work practices used to control emissions of particulate matter.
iii. The designated particulate matter emission rate, in pounds/hour and tons/year, from the affected unit with supporting calculations and documentation, including detailed documentation for the level of emissions control achieved through the work practices that are used to control particulate matter emissions. For each category of affected unit (e.g., coal and limestone receiving and handling), the sum of these emission rates shall not exceed the totals in Table II for the category of affected unit. (See also Condition 2.2.2 and 2.2.7.)

b. The Permittee shall keep records for the amount of bulk materials received by or shipped from the plant by category or type of material (tons/month).

c. For affected units that are subject to NSPS, the Permittee shall fulfill applicable recordkeeping requirements of the NSPS, 40 CFR 60.7 and 60.676.

d. The Permittee shall keep inspection and maintenance logs for each control device associated with an affected unit.

e. The Permittee shall maintain records documenting implementation of the fugitive emission operating program required by Condition 2.2.6, including:

i. Records for inspections required by Condition 2.2.6(c) to verify the implementation of continuous control measures (that are to be in place whenever an affected unit is in operation), including the date and time, the name of the responsible party, identification of the affected unit(s) that were inspected, and the observed condition of control measures;

ii. Records for the implementation of intermittent control measures, i.e., application of suppressants including identification of the affected unit, identification of the suppressant, application rate, dates or date and time of applications, and quantity of total suppressant applied;

iii. Records for application of physical or chemical control agents other than water including the name of the agent; target application concentration, if diluted with water; target application rate; and usage of the agent, gallons/month; and

iv. A log recording incidents when specified control measures were not present or were not used for an affected unit when it was in operation, including description, date, duration, means by which the incident was identified, and a statement of explanation.
f. The Permittee shall record any period during which an affected unit was in operation when its baghouse was not in operation or was not operating properly, as follows:

i. Each period when the pressure drop of a baghouse, as measured pursuant to Condition 2.2.9, deviated outside the levels set as good air pollution control practices (date, duration and description of the event).

ii. Each period when a baghouse failed to operate properly, which records shall include at least the information specified by Condition 4.3.

iii. Each period during which an affected unit deviated from the requirements of this permit, including applicable emission limits, which records shall include at least the information specified by Condition 4.3 and an estimate of the additional emissions of particulate matter that resulted, if any, with supporting calculations.

g. The Permittee shall keep records for all opacity observations made in accordance with USEPA Method 9 for affected units that it conducts or that are conducted on its behalf by individuals who are certified to make such observations. For each occasion on which such observations are made, these records shall include the identity of the observer, a description of the various observations that were made, the observed opacity from individual units, and copies of the raw data sheets for the observations.

h. The Permittee shall maintain the following records for the emissions of the affected units:

Records of emissions of particulate matter based on operating data for the unit(s) and appropriate emission factors, with supporting documentation and calculations.

2.2.12 Notifications

The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable emission standards or operating requirements for the affected units that continue* for more than 24 hours. These notifications shall include the information specified by Condition 4.5.

* For this purpose, time shall be measured from the start of a particular event. The absence of a deviation for a short period shall not be considered to end the event if the deviation resumes. In such circumstances, the event shall be considered to continue until corrective actions are taken so that the deviation ceases or the Permittee takes the affected unit out of service for repairs.
2.2.13 Reporting

a. The Permittee shall submit quarterly reports to the Illinois EPA for all deviations from emission standards, including standards for visible emissions and opacity, and operating requirements set by this permit. These notifications shall include the information specified by Condition 4.5.

b. These reports shall also address any deviations from applicable compliance procedures established by this permit for affected units.

2.2.14 Flexibility

The Permittee is authorized, as follows, to construct and operate affected units that differ from those described in the application without obtaining further approval by the Illinois EPA. This condition does not affect the Permittee’s obligation to comply with all applicable requirements for affected units:

a. This authorization only extends to changes that result from the detailed design of the plant and any refinements to that design of the affected units that occur during construction and the initial operation of the plant.

b. With respect to air quality impacts, these changes shall generally act to improve dispersion and reduce impacts, as emissions from individual units are lowered, units are moved apart or away from the fence line, stack heights are increased, and heights of nearby structures are reduced.

c. The Permittee shall notify the Illinois EPA prior to proceeding with any changes. In this notification, the Permittee shall describe the proposed changes and explain why the proposed changes will act to reduce impacts, with detailed supporting documentation.

d. Upon written request by the Illinois EPA, the Permittee shall promptly have air quality dispersion modeling performed to demonstrate that the overall effect of the changes is to reduce air quality impacts, so that impacts from affected units remain at or below those predicted by the air quality analysis accompanying the application.
CONDITION 2.3: UNIT-SPECIFIC CONDITIONS FOR COOLING TOWERS

2.3.1 Description of Emission Units

The affected units for the purpose of these unit-specific conditions are the two cooling towers associated with the steam cycle for each boiler. The cooling towers are sources of particulate matter because of mineral material present in the water, which is emitted to the atmosphere due to water droplets that escape from the cooling tower or completely evaporate. The emissions of particulate matter are controlled by drift eliminators, which collect water droplets entrained in the air exhausted from the cooling towers.

2.3.2 Control Technology Determination

The affected units shall be equipped, operated, and maintained with drift eliminators designed to limit the loss of water droplets from the unit to not more than 0.0005 percent of the circulating water flow.

2.3.3 Applicable Federal Emission Standards

None

2.3.4 Applicable State Emission Standards

Visible emission of fugitive particulate matter from the affected units shall comply with 35 IAC 212.301, which provides that visible emissions of fugitive particulate matter shall not be visible from any process, including any material handling or storage activity, when looking generally toward the zenith at a point beyond the property line of the source, except as provided by 35 IAC 212.314.

2.3.5 Applicability of Other Regulations

None

2.3.6 Operating Requirements

a. Chromium-based water treatment chemicals, as defined in 40 CFR 63.401, shall not be used in the affected units.

b. i. A. The Permittee shall equip the affected units with appropriate features, such as steam reheat, to enable them to be operated without a significant contribution to fogging and icing on offsite roadways during periods when fogging or icing are present in the area or weather conditions are conducive to fogging or icing.

B. Notwithstanding the above, the Permittee need not include such features in the affected units if it demonstrates by appropriate analysis, as approved in writing by the Illinois EPA, that the cooling towers
will be sited and designed and can be operated such that additional features are not needed to prevent a significant contribution to fogging and icing on offsite roadways.

ii. No later than 30 days after completion of the detailed design of the affected units and at least 60 days before construction of the affected units is begun, the Permittee shall submit a summary of the detailed design to the Illinois EPA and either:

A. A detailed description of the physical features that will be included in the affected units to satisfy Condition 2.3.6(b)(i)(A), the practices that would be followed for such features, and a demonstration that such features will be sufficient to prevent a significant contribution to fogging and icing on offsite roadways, for review and comment by the Illinois EPA; or

B. An analysis pursuant to Condition 2.3.6(b)(i)(B), including any operational practices that would be followed for the affected units to prevent a significant contribution to fogging and icing on offsite roadways, for review and approval by the Illinois EPA.

c. The Permittee shall operate and maintain the affected units, including the drift eliminators, in a manner consistent with good air pollution control practices for minimizing emissions.

d. The Permittee shall operate and maintain the affected units in accordance with written operating procedures, which procedures shall be kept current. These procedures shall address the practices that will be followed as good air pollution control practices and the actions that will be followed to prevent a significant contribution to icing and fogging on offsite roadways.

2.3.7 Emission Limitations

The total annual emissions of particulate matter from the affected units shall not exceed 15.0 tons/year, as determined by appropriate engineering calculations.

2.3.8 Emission Testing

None

2.3.9 Work Practices

The Permittee shall maintain the drift eliminators in the affected units in a manner consistent with good air pollution control practices for minimizing emissions.
2.3.10 Operational Monitoring and Measurements

a. The Permittee shall measure the total dissolved solids content in the water being circulated in the affected units on at least a monthly basis. Measurements of the total dissolved solids content in the wastewater discharge associated with the affected units, as required by a National Pollution Discharge Elimination System permit, may be used to satisfy this requirement if the effluent has not been diluted or otherwise treated in a manner that would significantly reduce its total dissolved solids content.

b. Upon written request by the Illinois EPA, the Permittee shall promptly have the water circulating in the affected units sampled and analyzed for the presence of hexavalent chromium in accordance with the procedures of 40 CFR 63.404(a) and (b).

2.3.11 Records

a. The Permittee shall keep a file that contains:

i. The design loss specification for the drift eliminators installed in each affected unit.

ii. The suppliers’ recommended procedures for inspection and maintenance of the drift eliminators.

iii. The operating factors, if any, used to determine the amount of water circulated in the affected units or the particulate matter emissions from the affected units, with supporting documentation.

iv. Copies of the Material Safety Data Sheets or other comparable information from the suppliers for the various water treatment chemicals that are added to the water circulated in the affected units.

b. The Permittee shall keep the following operating records for the affected units:

i. The amount of water circulated in the affected units, gallons/month. As an alternative to direct data for water flow, these records may contain other relevant operating data for the units (e.g., water flow to the units) from which the amount of water circulated in the units may be reasonably determined.

ii. Each occasion when the Permittee took action to prevent a significant contribution to fogging or icing from the affected units, including the date and duration, the action or actions that were taken, the weather conditions that triggered such actions, and the weather conditions when such actions were terminated.
c. The Permittee shall keep inspection and maintenance logs for the drift eliminators installed in each affected unit.

d. The Permittee shall maintain records for the particulate matter emissions of the affected units based on the above records, the measurements required by Condition 2.3.10(a), and appropriate USEPA emission estimation methodology and emission factors, with supporting calculation.

2.3.12 Notifications

The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements that are not addressed by the regular reporting required by Condition 2.3.13. These notifications shall include the information specified by Condition 4.5.

2.3.13 If the cooling towers are equipped with features to address fogging and icing, as addressed by Condition 2.3.6(b), the Permittee shall submit quarterly reports to the Illinois EPA summarizing the records required by Condition 2.3.11(b)(ii) and identifying any deviation from established practices for the use of such features.
CONDITION 2.4: UNIT-SPECIFIC CONDITIONS FOR THE AUXILIARY BOILER

2.4.1 Description of Emission Unit

The affected unit for the purpose of these unit-specific conditions is the auxiliary boiler for the plant, which is fired with natural gas. The auxiliary boiler is used to produce low-pressure steam to maintain the plant when the coal-fired boilers are not in operation and to support the startup of the coal-fired boilers.

2.4.2 List of Emission Units and Pollution Control Equipment

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Emission Control Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler</td>
<td>Natural Gas-Fired Boiler, with Nominal Rated Heat Input Capacity of 245 Million Btu/Hr</td>
<td>Low-NOx Burner</td>
</tr>
</tbody>
</table>

2.4.3 Control Technology Determination

a. The only fuel burned in the auxiliary boiler shall be natural gas.

b. The emissions from the affected boiler shall not exceed the following limits except during startup, shutdown and malfunction as addressed by Condition 2.4.3(c).

i. NO\textsubscript{x} - 0.167 lb/million Btu.

   This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.4.9 and equipment operation.

ii. CO - 0.11 lb/million Btu.

   This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.4.9 and equipment operation.

iii. VOM - 0.013 lb/million Btu.

   This limit shall apply as a 3-hour block average, with compliance determined by emission testing in accordance with Condition 2.4.9 and equipment operation.

c. The Permittee shall use reasonable practices to minimize emissions during startup, shutdown and malfunction of the auxiliary boiler, including:

i. Operation of the boiler and associated air pollution control equipment in accordance with written operating procedures that include startup, shutdown and malfunction plan(s); and
ii. Inspection, maintenance and repair of the boiler and associated air pollution control equipment in accordance with written maintenance procedures.

2.4.4 Applicable Federal Emission Standards

a. The auxiliary boiler is subject to the NSPS for Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Db, and related provisions in Subpart A.

b. At all times, the Permittee shall maintain and operate the auxiliary boiler, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions, pursuant to 40 CFR 60.11(d).

c. The auxiliary boiler is not subject to NOx emission standards under the NSPS because the annual capacity factor shall be less than 10 percent for natural gas.

2.4.5 Applicable State Emission Standards

a. The emission of smoke or other particulate matter from the auxiliary boiler shall not have an opacity greater than 30 percent, except as allowed by 35 IAC 212.124. Compliance with this limit shall be determined by 6-minute averages of opacity measurements in accordance with USEPA Reference Method 9. [35 IAC 212.109 and 212.123(a)]

b. The emission of carbon monoxide (CO) into the atmosphere from the auxiliary boiler shall not exceed 200 ppm, corrected to 50 percent excess air. [35 IAC 216.121]

2.4.6 Applicability of other Regulations

This permit is issued based on the auxiliary boiler not being an electrical generating unit, so that provisions of the federal Acid Rain Program are not applicable to the boiler.

2.4.7 Operating Requirements

a. The auxiliary boiler shall only be fired with natural gas.

b. i. The annual capacity factor of the affected boiler, as defined by 40 CFR 60.41b, shall not exceed 10 percent.

ii. Following the shakedown period for the coal-fired boilers, the auxiliary boiler shall not operate for more than 500 hours per year. Compliance with this limit shall be determined from a running total of 12 months of data.

c. The rated heat input of the auxiliary boiler shall not exceed 245 million Btu/hour.
2.4.8 Emission Limitations

Emissions of NOx, VOM, CO, and PM from the auxiliary boiler shall not exceed 10.3, 0.8, 6.8, and 0.5 tons/year, respectively. Compliance with these annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months.

2.4.9 Emission Testing

a. i. Within 60 days after achieving the maximum production rate at which the auxiliary boiler will be operated, but not later than 180 days after initial startup of the boiler, the Permittee shall have tests conducted for opacity and emissions of NOx, CO and VOC, as follows, at its expense by an approved testing service while the boiler is operating at maximum operating load and other representative operating conditions.

ii. In addition to the emission testing required above, the Permittee shall perform emission tests as requested by the Illinois EPA for the auxiliary boiler within 45 days of a written request by the Illinois EPA or such later date agreed to by the Illinois EPA.

b. The following methods and procedures shall be used for testing, unless otherwise specified or approved by the Illinois EPA.

- Opacity: Method 9
- Location of Sample Points: Method 1
- Gas Flow and Velocity: Method 2
- Flue Gas Weight: Method 3 or 3A
- Moisture: Method 4
- Nitrogen Oxides: Method 19 as specified in 40 CFR 60.48b
- Carbon Monoxide: Method 10
- Volatile Organic Compounds: Methods 25A and 18

c. Test plans, test notifications, and test reports shall be submitted to the Illinois EPA in accordance with Condition 4.2.

2.4.10 Operational Monitoring and Measurements

None

2.4.11 Emission Monitoring

None

2.4.12 Recordkeeping

a. The Permittee shall keep a file that contains:
The rated heat input capacity of the auxiliary boiler as provided by the manufacturer or subsequently determined based on the demonstrated heat input capacity of the boiler.

b. The Permittee shall maintain the following operating records for the auxiliary boiler:
   i. An operating log or other record that among other matters identifies each period when the boiler is operated and includes the information specified by 40 CFR 60.7(b).
   ii. A summary of operating hours (hours/month and hours/year) for all operation and operation when a coal boiler was operating.
   iii. Natural gas usage on a monthly basis (cubic feet).

c. The Permittee shall maintain a maintenance and repair log for the auxiliary boiler.

d. The Permittee shall keep records of the annual NO\textsubscript{x}, VOM, CO and PM emissions from the auxiliary boiler, based on fuel consumption and applicable emission factors, with supporting calculations.

2.4.13 Notifications

The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements. These notifications shall include the information specified by Condition 4.5.

2.4.14 Reporting

a. The Permittee shall fulfill applicable reporting requirements of the NSPS, 40 CFR 60.7 and 60.49b, for the auxiliary boiler by sending applicable notifications and reports to the Illinois EPA, including:

   Notification of the date of initial startup of the boiler, as provided by 40 CFR 60.7. This notification shall include: (1) the design heat input of the boiler, and (2) the annual capacity factor at which the Permittee anticipates operating the boiler. (40 CFR 60.49b(a).

2.4.15 Compliance Procedures

Compliance of the auxiliary boiler with the emission limits in Condition 2.4.8 shall be based on the operating records required by Condition 2.4.12 and appropriate emission factors.

a. The emission factors for NO\textsubscript{x}, CO, and VOM shall be based on the results of the emission testing required by Condition 2.4.9.

b. A published USEPA emission factor, as follows, may be used for PM when the boiler operates properly.

\[
\text{PM} \quad 0.0076 \text{ lb/million Btu}
\]
CONDITION 2.5: UNIT-SPECIFIC CONDITIONS FOR ROADWAYS AND OTHER OPEN AREAS

2.5.1 Description of Emission Units

The affected units for the purpose of these unit-specific conditions are roadways, parking areas, and other open areas at the plant, which may be sources of fugitive particulate matter due to vehicle traffic or wind blown dust.

2.5.2 Control Technology Determination

a. i. Good air pollution control practices shall be implemented to minimize and significantly reduce nuisance dust from affected units. After construction of the plant is complete, these practices shall provide for pavement on all regularly traveled roads and treatment (flushing, vacuuming, dust suppressant application, etc.) of paved and unpaved roads and areas that are routinely subject to vehicle traffic for very effective and effective control of dust, respectively (nominal 90 percent control for paved roads and areas and 80 percent control for unpaved roads and areas).

ii. For this purpose, roads that serve a main office, employee parking areas or are used on a daily basis by operating and maintenance personnel for the plant in the course of their typical duties, roads that experience heavy use during regularly occurring maintenance of the power plant facility during the course of a year, shall all be considered to be subject to regular travel and are required to be paved. Regularly traveled roads shall be considered to be subject to routine vehicle traffic except as they are used primarily for periodic maintenance and are currently inactive or as traffic has been temporarily blocked off. Other roads shall be considered to be routinely traveled if activities are occurring such that they are experiencing significant vehicle traffic.

b. The handling of material collected from any affected unit by sweeping or vacuuming trucks shall be enclosed or shall utilize spraying, pelleting, screw conveying or other equivalent methods to control emission of particulate matter.

2.5.3 Applicable Federal Emission Standards

None

2.5.4 Applicable State Emission Standards

a. Affected units shall comply with 35 IAC 212.301, which provides that emissions of fugitive particulate matter shall not be visible from any process, including any material handling or storage activity, when looking generally toward the zenith at a point beyond the property line of the source, except when the wind speed is greater than 25 miles per hour, as provided by 35 IAC 212.314.
2.5.5 Applicability of Other Regulations

This permit reflects a determination by the Illinois EPA that the source is a power plant or electrical generating operation so that the provisions of 35 IAC 212.306 are not applicable to roads and parking areas at the source. [35 IAC 212.306]

2.5.6 Operating Requirements

a. The Permittee shall carry out control of fugitive particulate matter emissions from affected units in accordance with a written operating program describing the measures being implemented in accordance with Conditions 2.5.2 and 2.5.4 to control emissions at each unit with the potential to generate significant quantities of such emissions, which program shall be kept current.

i. This program shall include maps or diagrams indicating the location of affected units with the potential to generate significant quantities of fugitive particulate matter, with description of the unit (length, width, surface material, etc.) and volume and nature of expected vehicle traffic, or other activity on such unit, and an identification of any roadways that are not considered routinely traveled, with justification.

ii. This program shall include a detailed description of the emissions control technique (e.g., vacuum truck, water spray, surfactant spray, water flushing, dust suppressant application, or sweeping) for the affected unit, including: typical application rate; type and concentration of additives; normal frequency with which measures would be implemented; circumstances, in which the measure would not be implemented, e.g., recent precipitation; triggers for additional control, e.g., observation of 10 percent opacity; and calculated control efficiency for particulate matter emissions.

b. The Permittee shall submit copies of this operating program to the Illinois EPA for review as follows:

i. A program addressing the construction of the plant shall be submitted within 30 days of beginning actual construction of the source.

ii. A program addressing the operation of the plant shall be submitted within 90 days of initial start up of the plant.

iii. Significant amendments to the program by the Permittee shall be submitted within 30 days of the date that the amendment is made.
c. A revised operating program shall be submitted to the Illinois EPA for review within 90 days of a request from the Illinois EPA for revision to address observed deficiencies in control of fugitive particulate emissions.

d. The Permittee shall conduct inspections of affected units on at least a weekly basis during construction of the plant and on a monthly basis thereafter with personnel not directly responsible for the day-to-day implementation of the fugitive dust control program, for the specific purpose of verifying that the measures identified in the operating program and other measures required to control emissions from affected units are being properly implemented.

2.5.7 Emission Limitations

The total annual emissions of particulate matter from the affected units shall not exceed 9.1 tons/year, as determined by appropriate engineering calculations.

2.5.8 Emission Testing

None

2.5.9 Operational Monitoring and Measurements

None

2.5.10 Emission Monitoring

None

2.5.11 Records

a. The Permittee shall keep a file that contains:

   i. The operating factors, if any, used to determine the amount of activity associated with the affected units or the particulate matter emissions from the affected units, with supporting documentation.

   ii. The designated particulate matter emission rate, in tons/year, from each category of emission unit (e.g., traffic associated with receiving of limestone), with supporting calculations and documentation. The sum of these rates shall not exceed the annual limit on emissions in Condition 2.5.7.

b. The Permittee shall maintain records documenting implementation of the operating program required by Condition 2.5.6, including:

   i. For each treatment of an affected unit or units, the name and location of the affected unit(s), the date and time, and the identification of the truck(s) or treatment equipment used;
ii. For each application of water or chemical solution by truck: application rate of water or suppressant, frequency of each application, width of each application, total quantity of water or chemical used for each application and, for each application of chemical solution, the concentration and identity of the chemical;

iii. For application of physical or chemical control agents: the name of the agent, application rate and frequency, and total quantity of agent and, if diluted, percent of concentration, used each day; and

iv. A log recording incidents when control measures were not used and incidents when additional control measures were used due to particular activities, including description, date, a statement of explanation, and expected duration of such circumstances.

c. The Permittee shall record any period during which an affected unit was not properly controlled as required by this permit, which records shall include at least the information specified by Condition 4.3 and an estimate of the additional emissions of particulate matter that resulted, if any, with supporting calculations.

d. The Permittee shall maintain records for the particulate matter emissions of the affected units based on plant operating data, the above records for the affected unit including data for implementation of the operating program, and appropriate USEPA emission estimation methodology and emission factors, with supporting calculations.

2.5.12 Notifications

The Permittee shall notify the Illinois EPA within 30 days of deviations from applicable requirements for affected units that are not addressed by the regular reporting required below. These notifications shall include the information specified by Condition 4.5.

2.5.13 Reporting

The Permittee shall submit quarterly reports to the Illinois EPA for affected units stating the following: the dates any necessary control measures were not implemented; a listing of those control measures; the reasons that the control measures were not implemented; and any corrective actions taken. This information includes, but is not limited to, those dates when controls were not applied based on a belief that application of such control measures would have been unreasonable given prevailing atmospheric conditions. This report shall be submitted to the Illinois EPA no later than 45 calendar days from the end of each calendar quarter.
SECTION 3: TRADING PROGRAM CONDITIONS

CONDITION 3.1: ACID RAIN PROGRAM REQUIREMENTS

a. Applicability

Under Title IV of the federal Clean Air Act, Acid Deposition Control, this plant or source is an affected source and the following emission units at the source are affected units for acid deposition:

Boilers 1 and 2

Note: Title IV of the Clean Air Act, and other laws and regulations promulgated thereunder, establish requirements for affected sources related to control of emissions of pollutants that contribute to acid rain, i.e., SO$_2$ and NO$_x$. For purposes of this permit, these requirements are referred to as Title IV provisions.

b. Applicable Emission Requirements

The owners and operators of the source shall not violate applicable Title IV provisions. In particular:

i. SO$_2$ emissions from the affected units shall not exceed any allowances that the source lawfully holds under Title IV provisions. [Environmental Protection Act, Sections 39.5(7)(g) and (17)(1)]

Note: Affected sources must hold SO$_2$ allowances to account for the SO$_2$ emissions from affected units at the source that are subject to Title IV provisions. Each allowance is a limited authorization to emit up to one ton of SO$_2$ emissions during or after a specified calendar year. The possession of allowances does not authorize exceedances of applicable emission standards or violations of the SO$_2$ ambient air quality standards.

ii. NO$_x$ emissions from each affected unit shall not exceed the applicable emission standard pursuant to 40 CFR Part 76.

c. Monitoring, Recordkeeping and Reporting

The owners and operators of the source and, to the extent applicable, their designated representative, shall comply with applicable requirements for monitoring, recordkeeping and reporting specified by Title IV provisions, including 40 CFR Part 75. [Environmental Protection Act, Sections 39.5(7)(b) and 17(m)]

Note: As already addressed in Condition 2.1.9, the following emission determination methods will be used for the affected units at this source.

- NO$_x$: Continuous Emissions Monitoring (40 CFR 75.12)
- SO$_2$: Continuous Emissions Monitoring (40 CFR 75.11)
- Opacity: Continuous Monitoring (40 CFR 75.14)
- O$_2$/CO$_2$: Continuous Monitoring for Oxygen or Carbon Dioxide (40 CFR Part 75.13)
d. **Acid Rain Permit**

The owners and operators of the source shall comply with the terms and conditions of the source’s Acid Rain permit. *(Environmental Protection Act, Section 39.5(17)(l))*

Note: The source is subject to an Acid Rain permit, which was issued pursuant to Title IV provisions, including Section 39.5(17) of the Environmental Protection Act. Affected sources must be operated in compliance with their Acid Rain permits. A copy of the initial Acid Rain permit is included as an attachment to this permit. Revisions and modifications of this Acid Rain permit, including administrative amendments and automatic amendments (pursuant to Sections 408(b) and 403(d) of the CAA or regulations thereunder) are governed by Title IV provisions, as provided by Section 39.5(13)(e) of the Environmental Protection Act, and revision or renewal of the Acid Rain permit may be handled separately from this permit.

e. **Coordination with Other Requirements**

i. This permit does not contain any conditions that are intended to interfere with or modify the requirements of Title IV provisions. In particular, this permit does not restrict the flexibility under Title IV provisions of the owners and operators of this source to amend their Acid Rain compliance plan. *(Environmental Protection Act, Section 39.5(17)(h))*

ii. Where another applicable requirement of this permit is more stringent than an applicable requirement of Title IV provisions, both requirements are enforceable and the owners and operators of the source shall comply with both requirements. *(Environmental Protection Act, Section 39.5(7)(h))*
CONDITION 3.2: NO\textsubscript{x} TRADING PROGRAM

a. Description of NO\textsubscript{x} Trading Program

The NO\textsubscript{x} Trading Program is a regional “cap and trade” market system for large sources of NO\textsubscript{x} emissions in the eastern United States, including Illinois. It is designed to reduce and maintain NO\textsubscript{x} emissions from the emission units covered by the program within a budget in order to contribute to attainment and maintenance of the ozone ambient air quality standard in the multi-state region covered by this program, as required by Section 110 of the CAA. The NO\textsubscript{x} Trading Program applies in addition to other applicable requirements for NO\textsubscript{x} emissions and in no way relaxes these other requirements.

An electrical generating unit (EGU) that is subject to the NO\textsubscript{x} Trading Program is referred to as a “budget EGU.” Sources that have one or more EGU or other units subject to the NO\textsubscript{x} Trading Program are referred to as budget sources.

The NO\textsubscript{x} Trading Program controls NO\textsubscript{x} emissions from budget EGUs and other budget units during a seasonal control period from May 1 through September 30 of each year, when weather conditions are conducive to formation of ozone in the ambient air. By November 30 of each year, the allowance transfer deadline, each budget source must hold “NO\textsubscript{x} allowances” for the actual NO\textsubscript{x} emissions of its budget units during the preceding control period. The USEPA will then retire NO\textsubscript{x} allowances in the source’s accounts in amounts equivalent to its seasonal emissions. If a source does not have sufficient allowances in its accounts, USEPA would subtract allowances from the source’s future allocation for the next control period and impose other penalties as appropriate. Stringent monitoring procedures developed by USEPA apply to budget units to assure that NO\textsubscript{x} emissions are accurately determined.

The number of NO\textsubscript{x} allowances available for budget sources is set by the overall budget for NO\textsubscript{x} emissions established by USEPA. This budget requires a substantial reduction in NO\textsubscript{x} emissions from historical levels as necessary to meet air quality goals. In Illinois, existing budget sources initially receive their allocation or share of the NO\textsubscript{x} allowances budgeted for EGUs in an amount determined by rule [35 IAC Part 217, Appendix F]. Between 2007 and 2011, the allocation mechanism for existing EGUs gradually shifts to one based on the actual utilization of EGU in preceding control periods. New budget EGUs, for which limited utilization data may be available, may obtain NO\textsubscript{x} allowances from the new source set-aside (NSSA), a portion of the overall budget reserved for new EGUs.

In addition to directly receiving or purchasing NO\textsubscript{x} allowances as described above, budget sources may transfer NO\textsubscript{x} allowances from one of their units to another. They may also purchase allowances in the marketplace from other sources that are willing to sell allowances that they have received. Each budget source must designate an account representative to handle all its allowance transactions. The USEPA, in a central, national system, maintains allowance accounts and record transfer of allowances among accounts.
The ability of sources to transfer allowances serves to minimize the costs of reducing NOx emissions from budget units to comply with the overall NOx budget. In particular, the NOx emissions of budget units that may be most economically controlled will be targeted by sources for further control of emissions. This will result in a surplus of NOx allowances from those units that can be transferred to other units at which it is more difficult to control NOx emissions. Experience with reduction of SO2 emissions under the federal Acid Rain program has shown that this type of trading program not only achieves regional emission reductions in a more cost-effective manner, but also results in greater overall reductions than application of traditional emission standards to individual emission units.

The USEPA developed the plan for the NOx Trading Program with assistance from affected states. Illinois rules for the NOx Trading Program for EGUUs are located in 35 IAC Part 217, Subpart W and have been approved by the USEPA. These rules provide for interstate trading, as mandated by Section 9.9 of the Environmental Protection Act. Accordingly, these rules refer to and rely upon federal rules at 40 CFR Part 96, which have been developed by USEPA for certain aspects of the NOx Trading Program, and which an individual state must follow to allow for interstate trading of NOx allowances.

Note: This narrative description of the NOx Trading Program is for informational purposes only and is not enforceable.

b. Applicability

The following emission units at this source are budget EGUUs for purposes of the NOx Trading Program. Accordingly, this source is a budget source and the Permittee is the owner or operator of a budget source and budget EGU. In this condition, these emission units are addressed as budget EGU.

Boiler 1
Boiler 2

c. General Provisions of the NOx Trading Program

i. This source and the budget EGUUs at this source shall comply with all applicable requirements of Illinois’ NOx Trading Program, i.e., 35 IAC Part 217, Subpart W, and 40 CFR Part 96 (excluding 40 CFR 96.4 (b) and 96.55 (c), and excluding 40 CFR 96, Subparts C, E and I), pursuant to 35 IAC 217.756(a) and 217.756(f)(2).

ii. Any provision of the NOx Trading Program that applies to a budget source (including any provision applicable to the account representative of a budget source) shall also apply to the owner or operator of such budget sources and to the owner and operator of each budget EGU at the source, pursuant to 35 IAC 217.756(f)(3).
iii. Any provision of the NO\textsubscript{x} Trading Program that applies to a budget EGU (including any provision applicable to the account representative of a budget EGU) shall also apply to the owner and operator of such budget EGU, pursuant to 35 IAC 217.756(f)(4).

d. Requirements for NO\textsubscript{x} Allowances

i. By November 30 of each year, the allowance transfer deadline, the account representative of each budget EGU at this source shall hold allowances available for compliance deduction under 40 CFR 96.54 in the budget EGUs compliance account or the source’s overdraft account in an amount that shall not be less than the budget EGUs total tons of NO\textsubscript{x} emissions for the preceding control period, rounded to the nearest whole ton, as determined in accordance with 40 CFR 96, Subpart H, plus any number necessary to account for actual utilization (e.g., for testing, start-up, malfunction, and shutdown under 40 CFR 96.42(e) for the control period, pursuant to 35 IAC 217.756(d)(1)). For purposes of this requirement, an allowance may not be utilized for a control period in a year prior to the year for which the allowance is allocated, pursuant to 35 IAC 217.756(d)(5).

ii. The account representative of a budget EGU that has excess emissions in any control period, i.e., NO\textsubscript{x} emissions in excess of the number of NO\textsubscript{x} allowances held as provided above, shall surrender the allowances as required for deduction under 40 CFR 96.54(d)(1), pursuant to 35 IAC 217.756(f)(5). In addition, the owner or operator of a budget EGU that has excess emissions shall pay any fine, penalty, or assessment, or comply with any other remedy imposed under 40 CFR 96.54(d)(3) and the Environmental Protection Act, pursuant to 35 IAC 217.756(f)(6). Each ton of NO\textsubscript{x} emitted in excess of the number of NO\textsubscript{x} allowances held as provided above for each budget EGU for each control period shall constitute a separate violation of 35 IAC Part 217 and the Environmental Protection Act, pursuant to 35 IAC 217.756(d)(2).

iii. An allowance allocated by the Illinois EPA or USEPA under the NO\textsubscript{x} Trading Program is a limited authorization to emit one ton of NO\textsubscript{x} in accordance with the NO\textsubscript{x} Trading Program. As explained by 35 IAC 217.756(d)(6), no provision of the NO\textsubscript{x} Trading Program, the budget permit application, the budget permit, or a retired unit exemption under 40 CFR 96.5 and no provision of law shall be construed to limit the authority of the United States or the State of Illinois to terminate or limit this authorization. As further explained by 35 IAC 217.756(d)(7), an allowance allocated by the Illinois EPA or USEPA under the NO\textsubscript{x} Trading Program does not constitute a property right. As provided by 35 IAC 217.756(c)(4), allowances shall be held, deducted from, or transferred among allowance accounts in accordance with 35 IAC Part 217, Subpart W, and 40 CFR 96, Subparts F and G.
e. Monitoring Requirements for Budget EGUs

i. The Permittee shall comply with the monitoring requirements of 40 CFR Part 96, Subpart H, for each budget EGU and the compliance of each budget EGU with the emission limitation under Condition 3 (d)(1) shall be determined by the emission measurements recorded and reported in accordance with 40 CFR 96, Subpart H, pursuant to 35 IAC 217.756(c)(1), (c)(2) and (d)(3).

ii. The account representative for the source and each budget EGU at the source shall comply with those sections of the monitoring requirements of 40 CFR 96, Subpart H, applicable to an account representative, pursuant to 35 IAC 217.756(c)(1) and (d)(3).

f. Recordkeeping Requirements for Budget EGUs

Unless otherwise provided below, the Permittee shall keep on site at the source each of the following documents for a period of at least five years from the date the document is created. This period may be extended for cause at any time prior to the end of the five years, in writing by the Illinois EPA or the USEPA (35 IAC 217.756(e)(1)).

i. The account certificate of representation of the account representative for the source and each budget EGU at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with 40 CFR 96.13, as provided by 35 IAC 217.756 (e)(1)(A). These certificates and documents must be retained on site at the source for at least five years after they are superseded because of the submission of a new account certificate of representation changing the account representative.

ii. All emissions monitoring information, in accordance with 40 CFR 96, Subpart H, (provided that to the extent that 40 CFR 96, Subpart H, provides for a three year period for retaining records, the three year period shall apply,) pursuant to 35 IAC 217.756(e)(1)(B).

iii. Copies of all reports, compliance certifications, and other submissions and all records made or required under the NO\textsubscript{x} Trading Program or documents necessary to demonstrate compliance with requirements of the NO\textsubscript{x} Trading Program, pursuant to 35 IAC 217.756(e)(1)(C).

iv. Copies of all documents used to complete a budget permit application and any other submission under the NO\textsubscript{x} Trading Program, pursuant to 35 IAC 217.756(e)(1)(D).

g. Reporting Requirements for Budget EGUs

i. The account representative for this source and each budget EGU at this source shall submit to the Illinois EPA and USEPA the reports and compliance certifications required under the NO\textsubscript{x} Trading Program, including those under 40 CFR 96, Subparts D and H and 35 IAC 217.774, pursuant to 35 IAC 217.756(e)(2).
ii. These submittals need only be signed by the designated representative, who may serve in place of the responsible official for this purpose as provided by Section 39.5(1) of the Environmental Protection Act, and submittals to the Illinois EPA need only be made to the Illinois EPA, Air Compliance Section.

h. Allocation of NO\textsubscript{x} Allowances to Budget EGUs

i. For the first four control periods that a budget EGU identified in Condition 3.2(b) operates, it will not be entitled to direct allocations of NO\textsubscript{x} allowances because the EGU will be considered a “new” budget EGU, as defined in 35 IAC 217.768(a)(1).

ii. A. After the first four control periods, as addressed above, the budget EGU will cease to be “new” budget EGU and the source will be entitled to an allocation of NO\textsubscript{x} allowances for the budget EGU as provided in 35 IAC 217.764. For example, for 2010, the allocation of NO\textsubscript{x} allowances will be governed by 35 IAC 217.764(e)(2) and (b)(4).

B. In accordance with 35 IAC 217.762, the theoretical number of NO\textsubscript{x} allowances for these budget EGUs, calculated as the product of the applicable NO\textsubscript{x} emissions rate and heat input, as follows, shall be the basis for determining the allocation of NO\textsubscript{x} allowances to these EGUs:

1. As provided by 35 IAC 217.762(a)(2), the applicable NO\textsubscript{x} emission rates for these EGUs is 0.07 lb/million Btu. This is the permitted emission rates for these EGUs as contained in Condition 2.1.2(b)(iii). The permitted NO\textsubscript{x} emission rate is the applicable rate because it is between 0.15 lb/million Btu and 0.055 lb/million Btu, as provided by 35 IAC 217.762(a)(2).

2. The applicable heat input (million Btu/control period) shall be the average of the two highest heat inputs from the control periods four to six years prior to the year for which the allocation is being made, as provided by 35 IAC 217.762(b)(1).

j. Eligibility for NO\textsubscript{x} Allowances from the New Source Set-Aside (NSSA)

The Permittee is eligible to obtain NO\textsubscript{x} allowances for the budget EGU identified in Condition 3.2(b) from the NSSA, as provided by 35 IAC 217.768, because the budget EGU are “new” budget EGU.

k. Eligibility for Early Reduction Credits

The Permittee is not eligible to request NO\textsubscript{x} allowances for the budget EGU identified in Condition 3.2(b) for any early reductions in NO\textsubscript{x} emissions, as provided by 35 IAC 217.770.
1. Budget Permit Required by the NO\textsubscript{x} Trading Program

   i. For this source, this condition of this permit, i.e., Condition 3.2, is the Budget Permit required by the NO\textsubscript{x} Trading Program and is intended to contain federally enforceable conditions addressing all applicable NO\textsubscript{x} Trading Program requirements. This Budget Permit shall be treated as a complete and segregable portion of this permit, as provided by 35 IAC 217.758(a)(2).

   ii. The Permittee and any other owner or operator of this source and each budget EGU at the source shall operate the budget EGU in compliance with this Budget Permit, pursuant to 35 IAC 217.756(b)(2).

   iii. No provision of this Budget Permit or the associated application shall be construed as exempting or excluding the Permittee, or other owner or operator and, to the extent applicable, the account representative of a budget source or budget EGU from compliance with any other regulation or requirement promulgated under the Clean Air Act, the Environmental Protection Act, the approved State Implementation Plan, or other federally enforceable permit, pursuant to 35 IAC 217.756(g).

   iv. Upon recordation by USEPA, under 40 CFR 96, Subparts F or G, or 35 IAC 217.782, every allocation, transfer, or deduction of an allowance to or from the budget EGUs’ compliance accounts or to or from the overdraft account for the budget source is deemed to amend automatically, and become part of, this budget permit, pursuant to 35 IAC 217.756(d)(8). This automatic amendment of this budget permit shall be deemed an operation of law and will not require any further review.

   v. No revision of this Budget Permit shall excuse any violation of the requirements of the NO\textsubscript{x} Trading Program that occurs prior to the date that the revision to this permit takes effect, pursuant to 35 IAC 217.756(f)(1).

   vi. The Permittee, or other owner or operator of the source, shall reapply for a Budget Permit for the source as required by 35 IAC Part 217, Subpart W and Section 39.5 of the Act. For purposes of the NO\textsubscript{x} Trading Program, the application shall contain the information specified by 35 IAC 217.758(b)(2).
SECTION 4: GENERAL PERMIT CONDITIONS

CONDITION 4.1: STANDARD CONDITIONS

Standard conditions for issuance of construction permits, attached hereto and incorporated herein by reference, shall apply to this project, unless superseded by other conditions in the permit.

CONDITION 4.2: GENERAL REQUIREMENTS FOR EMISSION TESTING

a. i. At least 60 days prior to the actual date of initial emission testing required by this permit, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing and shall include at a minimum:

A. The person(s) who will be performing sampling and analysis and their experience with similar tests.

B. The specific conditions, e.g., operating rate and control device operating conditions, under which testing shall be performed including a discussion of why these conditions will be representative and the means by which the operating parameters will be determined.

C. The specific determinations of emissions that are intended to be made, including sampling and monitoring locations. As part of this plan, the Permittee may set forth a strategy for performing emission testing in the normal load range of the boiler.

D. The test method(s) that will be used, with the specific analysis method if the method can be used with different analysis methods.

ii. As provided by 35 IAC 283.220(d), the Permittee need not submit a test plan for subsequent emissions testing that will be conducted in accordance with the procedures used for previous tests accepted by the Illinois EPA or the previous test plan submitted to and approved by the Illinois EPA, provided that the Permittee’s notification for testing, as required below, contains the information specified by 35 IAC 283.220(d)(1)(A), (B) and (C).

b. i. The Permittee shall notify the Illinois EPA prior to performing emissions testing required by this permit to enable the Illinois EPA to observe the tests. Notification for the expected date of testing shall be submitted a minimum of 30 days* prior to the expected date, and identify the testing that will be performed. Notification of the actual date and expected time of testing shall be submitted a minimum of 5 working days* prior to the actual date of testing.
* For a particular test, the Illinois EPA may at its discretion accept shorter advance notification provided that it does not interfere with the Illinois EPA's ability to observe testing.

ii. This notification shall also identify the parties that will be performing testing and the set or sets of operating conditions under which testing will be performed.

c. Three copies of the Final Reports for emission tests shall be forwarded to the Illinois EPA within 30 days after the test results are compiled and finalized but not later than 90 days after the date of testing. At a minimum, the Final Report for testing shall contain:

i. General information, i.e., testing personnel and test dates;

ii. A summary of results;

iii. Description of test method(s), including a description of sampling points, sampling train, analysis equipment, and test schedule;

iv. The operating conditions of the emission unit and associated control devices during testing; and

v. Data and calculations, including copies of all raw data sheets and records of laboratory analysis, sample calculations, and data on equipment calibration.

CONDITION 4.3: REQUIREMENTS FOR RECORDS FOR DEVIATIONS

Except as specified in a particular provision of this permit or in a subsequent CAAPP Permit for the plant, records for deviations from applicable emission standards and control requirements shall include at least the following information: the date, time and estimated duration of the event; a description of the event; the manner in which the event was identified, if not readily apparent; the probable cause for deviation, if known, including a description of any equipment malfunction/breakdown associated with the event; information on the magnitude of the deviation, including actual emissions or performance in terms of the applicable standard if measured or readily estimated; confirmation that standard procedures were followed or a description of any event-specific corrective actions taken; and a description of any preventative measures taken to prevent future occurrences, if appropriate.

CONDITION 4.4: RETENTION AND AVAILABILITY OF RECORDS

Except as specified in a particular provision of this permit or in a subsequent CAAPP Permit for the plant, all records, including written procedures and logs, required by this permit shall be kept at a readily accessible location at the plant and be available for inspection and copying by the Illinois EPA and shall be retained for at least five years.
CONDITION 4.5: NOTIFICATION AND REPORTING OF DEVIATIONS

Except as specified in a particular provision of this permit or in a subsequent CAAPP Permit for the plant, notifications and reports for deviation from applicable emission standards and control requirements shall include at least the following information: the date and time of the event, a description of the event, information on the magnitude of the deviation, a description of the corrective measures taken, and a description of any preventative measures taken to prevent future occurrences.

CONDITION 4.6: GENERAL REQUIREMENTS FOR NOTIFICATION AND REPORTS

a. i. Unless otherwise specified in the particular provision of this permit or in the written instructions distributed by the Illinois EPA for particular reports, reports and notifications shall be sent to the Illinois EPA – Air Compliance Section with a copy sent to the Illinois EPA – Air Regional Field Office.

ii. As of the date of issuance of this permit, the addresses of the office that should generally be utilized for the submittal of reports and notifications are as follows:

A. Illinois EPA – Air Compliance Section
   Illinois Environmental Protection Agency
   Bureau of Air
   Compliance and Enforcement Section (#40)
   P.O. Box 19276
   Springfield, Illinois 62794-9276

B. Illinois EPA – Air Regional Field Office
   Illinois Environmental Protection Agency
   Division of Air Pollution Control
   2009 Mall Street
   Collinsville, Illinois 62234

C. USEPA Region 5 – Air Branch
   USEPA (AE-17J)
   Air and Radiation Division
   77 West Jackson Boulevard
   Chicago, Illinois 60604

b. The Permittee shall submit Annual Emission Reports to the Illinois EPA in accordance with 35 IAC Part 254. For hazardous air pollutants, these reports shall include emissions information for at least the following pollutants: hydrogen chloride, hydrogen fluoride, mercury, arsenic, beryllium, cadmium, chromium, lead, manganese, and nickel.
### Table I

**Emission Limitations for Coal-Fired Boilers**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Individual Boiler</th>
<th>Combined</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lb/Million Btu&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Lb/Hour</td>
<td>Tons/Year&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>NO&lt;sub&gt;x&lt;/sub&gt;</td>
<td>0.07</td>
<td>893, 24-Hour Average&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2,282</td>
</tr>
<tr>
<td>CO</td>
<td>0.12&lt;sup&gt;d&lt;/sup&gt;</td>
<td>893, 24-Hour Average</td>
<td>3,912</td>
</tr>
<tr>
<td>VOM</td>
<td>0.004</td>
<td>29.8, 3-Hour Average</td>
<td>130</td>
</tr>
<tr>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.182</td>
<td>3,126, 24-Hour Average&lt;sup&gt;e&lt;/sup&gt;</td>
<td>5,933</td>
</tr>
<tr>
<td>PM/PM&lt;sub&gt;10&lt;/sub&gt; Filterable&lt;sup&gt;f&lt;/sup&gt;</td>
<td>0.015</td>
<td>112, 3-Hour Average</td>
<td>490</td>
</tr>
<tr>
<td>PM&lt;sub&gt;10&lt;/sub&gt; Total</td>
<td>0.035&lt;sup&gt;g&lt;/sup&gt;</td>
<td>261, 3-Hour Average&lt;sup&gt;h&lt;/sup&gt;</td>
<td>1,143&lt;sup&gt;h&lt;/sup&gt;</td>
</tr>
<tr>
<td>Sulfuric Acid Mist</td>
<td>0.005</td>
<td>37.1, 3 Hour Average</td>
<td>162.5</td>
</tr>
<tr>
<td>Fluorides&lt;sup&gt;i&lt;/sup&gt;</td>
<td>0.00026</td>
<td>2.0, 3-Hour Average</td>
<td>8.75</td>
</tr>
<tr>
<td>Lead&lt;sup&gt;j&lt;/sup&gt;</td>
<td>----</td>
<td>0.0678, 3-Hour Average</td>
<td>0.295</td>
</tr>
<tr>
<td>Mercury</td>
<td>----</td>
<td>0.016, 3-Hour Average&lt;sup&gt;k&lt;/sup&gt;</td>
<td>0.07</td>
</tr>
<tr>
<td>Beryllium</td>
<td>----</td>
<td>0.0085, 3-Hour Average&lt;sup&gt;k&lt;/sup&gt;</td>
<td>0.0371</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>----</td>
<td>24.4, 3-Hour Average&lt;sup&gt;k&lt;/sup&gt;</td>
<td>107.0</td>
</tr>
</tbody>
</table>

**Notes:**

<sup>a</sup> Compliance with the emission rates expressed in pound/million Btu heat input shall be determined in accordance with the provisions in Condition 2.1.2(b).

<sup>b</sup> These limitations address all emissions from the boiler(s), including emissions that occur during periods of startup, shutdown and malfunction addressed by Condition 2.1.6.

<sup>c</sup> This limitation does not apply during startup and shutdown. The emissions of NO<sub>x</sub> from the boilers during such periods are addressed by the BACT limit for NO<sub>x</sub>, which applies as a 30-day average.

<sup>d</sup> This emission rate does not apply for startup or shutdown of a boiler. The emissions of CO from a boiler during such periods are addressed by a limitation expressed in pounds/hour, 24-hour average basis, which is the product of the design capacity of the boiler, in million Btu/hr, and the otherwise applicable BACT limit in lb/million Btu.

<sup>e</sup> This limitation is reduced to 2,450 lb/hour, daily average, no later than 24 months after initial startup of a boiler, pursuant to Condition 2.1.7(a)(i), and emissions may also be further restricted, pursuant to Condition 2.1.16, Optimization of Daily Control of SO<sub>2</sub> Emissions.

<sup>f</sup> All particulate matter (PM) measured by USEPA Method 5 shall be considered PM<sub>10</sub> unless PM emissions are tested by USEPA Method 201 or 201A, as specified in 35 IAC 212.108(a). These PM limits do not address condensable particulate matter.
This limit, which addresses both filterable and condensable PM10, is subject to reduction pursuant to Condition 2.1.17, Revision of Total PM10 Emission Limit Based on Results of Emission Testing.

If the limit for total PM10 emissions is reduced pursuant to Condition 2.1.17, this limitation shall also be reduced on a pro-rata basis.

The limit for fluorides is expressed in terms of hydrogen fluorides.

The limit for lead is expressed in terms of elemental lead. As this limit is applicable during startup, shutdown and malfunction, compliance shall be determined by engineering analysis and calculations.

This limit does not apply during periods of startup, shutdown and malfunction, as addressed by Condition 1.4.
<table>
<thead>
<tr>
<th>Emission Units</th>
<th>Application Designation</th>
<th>Pounds/Hour</th>
<th>Tons/Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone Reclaim</td>
<td>EP17, EP39</td>
<td>0.156</td>
<td>0.68</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td>4.046</td>
<td>17.73</td>
</tr>
<tr>
<td>Limestone Preparation</td>
<td>EP75A, EP75B</td>
<td>0.002</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Subtotal</td>
<td>0.002</td>
<td>0.01</td>
</tr>
</tbody>
</table>

| Waste and Ash Handling and Loadout                 | EP14, EP78, EP80, EP107            | 0.154       | 0.67      |
|                                                     | Subtotal                           | 0.154       | 0.67      |

| Total                                             |                                    | 4.202       | 18.4      |
ATTACHMENT 2: STANDARD PERMIT CONDITIONS

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS
ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Illinois EPA and a supplemental written permit issued.

4. The Permittee shall allow any duly authorized agent of the Illinois EPA upon the presentation of credentials, at reasonable times:
   a. To enter the Permittee’s property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,
   b. To have access to and to copy any records required to be kept under the terms and conditions of this permit,
   c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,
   d. To obtain and remove samples of any discharge or emissions of pollutants, and
   e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.
5. The issuance of this permit:
   a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,
   b. Does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities.
   c. Does not release the Permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations.
   d. Does not take into consideration or attest to the structural stability of any units or parts of the project, and
   e. In no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Illinois EPA before the equipment covered by this permit is placed into operation.

b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.

7. The Illinois EPA may file a complaint with the Board for modification, suspension or revocation of a permit.
   a. Upon discovery that the permit application contained misrepresentations, misinformation or false statement or that all relevant facts were not disclosed, or
   b. Upon finding that any standard or special conditions have been violated, or
   c. Upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

July, 1985, Revised, May, 1999

IL 532-0226
ATTACHMENT 3: ACID RAIN PERMIT

217-782-2113

ACID RAIN PROGRAM PERMIT

Prairie State Generating Company, LLC
Attn: Mr. Lars W. Scott, Designated Representative
701 Market Street, Suite 781
St. Louis, Missouri  63010

Oris No.: 55856
Illinois EPA I.D. No.: 189808AAB
Source/Unit: Prairie State Generating Company, LLC,
Units 01 and 02
Date Received: October 11, 2002
Date Issued: January 14, 2005
Effective Date: January 1, 2007
Expiration Date: December 31, 2011

STATEMENT OF BASIS:

In accordance with Section 39.5(17)(b) of the Illinois Environmental Protection Act and Titles IV and V of the Clean Air Act, the Illinois Environmental Protection Agency is issuing this Acid Rain Program permit for the Prairie State Generating Station.

SULFUR DIOXIDE (SO₂) ALLOCATIONS AND NITROGEN OXIDE (NOₓ) REQUIREMENTS FOR EACH AFFECTED UNIT:

<table>
<thead>
<tr>
<th>Unit 01 and Unit 02</th>
<th>SO₂ Allowances</th>
<th>These units are not entitled to an allocation of SO₂ allowances pursuant to 40 CFR Part 73.</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ Emission Limitation</td>
<td>These units are subject to a NOₓ emissions limitation under 40 CFR Part 76.</td>
<td></td>
</tr>
</tbody>
</table>

This Acid Rain Program permit contains provisions related to sulfur dioxide (SO₂) emissions and requires the owners and operators to hold SO₂ allowances to account for SO₂ emissions beginning in the year 2000. An allowance is a limited authorization to emit up to one ton of SO₂ during or after a specified calendar year. Although this plant is not eligible for an allowance allocated by USEPA, the owners or operators may obtain SO₂ allowances to cover emissions from other sources under a marketable allowance program. The transfer of allowances to and from a unit account does not necessitate a revision to this permit (See 40 CFR 72.84).

This permit contains provisions related to nitrogen oxide (NOₓ) emissions requiring the owners or operators to monitor NOₓ emissions from affected units in accordance with the applicable provisions of 40 CFR Part 75.
This Acid Rain Program permit does not authorize the construction and operation of the affected units as such matters are addressed by Titles I and V of the Clean Air Act. If the construction and operation of one of the affected units is not undertaken, this permit shall not cover such unit.

In addition, notwithstanding the effective date of this permit as specified above, this permit shall not take effect for an individual affected unit until January 1 of the year in which the unit commences operation.

COMMENTS, NOTES AND JUSTIFICATIONS:

This permit does not affect the owners and operators responsibility to meet all other applicable local, state, and federal requirements, including requirements addressing SO₂ and NOₓ emissions.

PERMIT APPLICATION:

The SO₂ allowance requirements and other standard requirements as set forth in the application are incorporated by reference into this permit. The owners and operators of this source must comply with the standard requirements and special provisions set forth in the application.

If you have any questions regarding this permit, please contact Shashi Shah at 217/782-2113.

ORIGINAL SIGNED BY DONALD E. SUTTON

Donald E. Sutton, P.E.
Manager, Permits Section
Division of Air Pollution Control

DES:SRS:jar

cc: Cecilia Mijares, USEPA Region V
Illinois EPA Region 3
DETERMINING THE SORBENT INJECTION RATE FOR CONTROL OF MERCURY EMISSIONS FROM THE COAL-FIRED BOILERS

1. **Purpose**

   This attachment contains the requirements for the sorbent injection systems for control of mercury emissions from the coal-fired boilers if the boilers are subject to Condition 2.1.2(c)(ii)(A) and the Permittee elects to comply with Permit Option B, i.e., use of a control system for mercury emissions. Among other matters, this attachment defines the process by which the applicable injection rate of sorbent for such systems will be determined. These requirements are included as an attachment to this permit, rather than in the body of the permit, due to the detailed nature of the requirements and the likelihood that these requirements will never take effect, as the emissions of mercury from the coal-fired boiler are subject to requirements adopted by USEPA pursuant to the Clean Air Act.

2. **General Requirements**

   a. The sorbent injection systems, including the selected sorbent(s) shall be designed, constructed and maintained in accordance with good air pollution control practices. For this purpose, sorbent(s) shall be used, such as treated activated carbon, that have been demonstrated to have high levels of effectiveness in similar boiler/control device applications (or pilot tests on an affected boiler). The systems shall have ample capacity to handle and inject such sorbent(s), and the location, number and type of injection ports designed for effective distribution of sorbent in the flue gas. The Permittee shall submit a demonstration to the Illinois EPA showing that the proposed sorbent injection systems meet these criteria, for review and approval by the Illinois EPA.

   b. i. The sorbent injection systems shall each be operated to inject sorbent at a rate, in lb/million Btu or lb/scf of flue gas, that is at least at the rate that has been determined to represent the maximum practicable degree of removal for mercury, as previously established pursuant to an evaluation of the effectiveness of the sorbent for control of mercury conducted in accordance with Condition 3 or 4, below. This rate shall be maintained while coal is being fired in the boiler, including periods of startup and shutdown of the boiler.

   ii. Notwithstanding the above, for purposes of evaluating the performance of sorbent(s), the Permittee may operate without the sorbent injection system in service or at low rates of sorbent injection as necessary to (1) to prepare for the formal evaluation of a sorbent, i.e., flushing residual sorbent from the boiler and control train, and (2) determine the “performance curve”, provided that the number and duration of such operation is minimized to the extent reasonably
necessary for this purpose. (Refer to Paragraph 5(a), below, for the definition of the performance curve.) The Permittee may also conduct pilot tests to confirm suitability of a potential sorbent prior to a detailed evaluation, with prior notification to the Illinois EPA describing such tests and the available data indicating the suitability of the sorbent material for effective control of mercury.

3. Initial Evaluation of the Effectiveness of Sorbent Injection and Establishment of the Optimum Sorbent Injection Rate
   
   a. The Permittee shall perform an evaluation of the effectiveness of injecting sorbent(s) for control of mercury in accordance with a plan submitted to the Illinois EPA for review and comment.
      
      i. The Permittee shall submit the initial plan to the Illinois EPA no later than 180 days after initial start-up of a boiler.
      
      ii. The Permittee shall promptly begin this evaluation after a boiler demonstrates compliance with all applicable short-term emission limits as shown by emission testing and monitoring. At this time, the Permittee shall submit an update to the plan that describes its findings with respect to control of mercury emissions during the shakedown of the boilers, which highlights possible areas of interest for this evaluation.
      
      iii. This evaluation shall be completed and a detailed written report submitted to the Illinois EPA within two years after the initial startup of a boiler. This report shall include proposed injection rate limit(s) for mercury emissions. (See Condition 3(d)(i), below.)
      
      iv. This deadline may be extended by the Illinois EPA for an additional year if the Permittee submits an interim report (1) demonstrating the need for additional data to effectively evaluate sorbent injection and (2) includes an interim limit for mercury injection that provides effective control of mercury.

   b. i. If the Permittee is conducting monitoring for mercury emissions with a continuous method, the plan shall provide for systematic review of mercury emissions as related to variation in operation of the boiler, within the normal range of boiler operation, including the effect of (1) boiler load and combustion settings, including excess oxygen, (2) operating data for the SCR system, including the level of uncontrolled NOx before the SCR, as predicted from boiler operating data, (3) operating data for the scrubber, including pH of the scrubba, and (4) operating data for the wet WESP. As an alternative to reliance on the measurements from a continuous monitoring system, the Permittee may also supplement its monitoring with semi-continuous monitoring, as provided below.
ii. If the Permittee is conducting monitoring for mercury emissions with a semi-continuous method, the sampling periods shall be of an appropriate duration to cover a representative selection of operation of the boiler.

c. In conjunction with such measurements of mercury emissions, the Permittee shall sample and analyze the fuel supply to the boiler so that representative data for the mercury content of the fuel supply is available that correlates with emission measurements.

d. i. Unless the Permittee elects to conduct a supplementary investigation, as provided below, the maximum practicable degree of removal shall be injection of sorbent at a rate that is twice the rate at the “transition point” from the performance curve. (Refer to Paragraph 5(b), below, for the definition of the transition point.) The sorbent injection systems shall be operated at this rate.

ii. The Permittee may elect to conduct a supplemental investigation of the effectiveness of injection of sorbent(s) to determine whether effective control of mercury, as generally required, is achieved with lower (or higher) injection rates considering the operating rate or other relevant operating parameters of the boilers or control train, excluding periods of startup and shutdown of boilers. For this purpose, the Permittee shall conduct additional measurements and develop additional performance curves for the control of mercury emissions for the boilers under such operating conditions. In the report for the evaluation, the Permittee shall explain why such operating conditions affect the control of mercury emissions, provide the criteria for identification of such operating conditions, and identify the rates at which the sorbent injection system must be operated during such conditions, determined as twice the rate at the “transition point” on the applicable performance curve.

4. Subsequent Evaluation of the Effectiveness of Sorbent Injection and Adjustment of the Optimum Sorbent Injection Rate

a. The Permittee shall repeat the evaluation described in Condition 3, above, in the following circumstances:

i. If the initial evaluation of sorbent injection does not demonstrate that 90 percent or more overall control of mercury will be achieved, a new evaluation shall be commenced two years after the initial evaluation was completed.

ii. If the Permittee undertakes significant changes to the mercury control system, e.g., use of a different sorbent or changes in the location or type of injection ports, at the conclusion of such changes.
iii. If the Permittee undertakes significant changes to other devices in the control train, e.g., use of a different catalyst in the SCR or changes in the chemistry of the scrubber which would generally act to reduce the effectiveness of those devices in controlling or facilitating the control of mercury emissions, at the conclusion of such changes.

iv. If requested by the Illinois EPA for purposes of periodic confirmation of the effectiveness of sorbent injection, which request shall not be made more than once every five years.

v. If the Permittee elects to perform such evaluation, provided, however that the Permittee shall explain why such an evaluation is being undertaken if it is less than two years after completion of the last evaluation.

b. For the purpose of subsequent evaluation, the plan shall be submitted to the Illinois EPA for review and approval at least 45 days before undertaking changes that trigger the need to perform such an evaluation and the evaluation shall be completed in one year, with opportunity for a 6-month extension.

c. As a subsequent evaluation reassesses the continuing operation of the boilers or addresses the future operation of the boilers, the results of the evaluation shall supersede the results of the preceding evaluation and thereafter govern the operation of the sorbent injection systems. For example, if the subsequent evaluation was performed for a new sorbent material and the boilers continue to be operated with such sorbent, operation shall be governed by the results of the subsequent evaluation. If the new sorbent will not continue to be used, operation shall be governed by the results of the preceding evaluation for the sorbent material that will be used.

5. Definition of Terms As Related to Sorbent Injection for Control of Mercury Emissions

For the purpose of these conditions, the following terms shall apply:

a. The “performance curve” is a graphical representation of the effectiveness of a particular sorbent in controlling mercury emissions, comparing the effectiveness of control with increasing rates of sorbent injection.

A performance curve for injection of a particular sorbent material is established by conducting a series of tests under representative operating conditions of the boiler to measure mercury emissions at different rates of sorbent injection (typically starting from zero sorbent to high rates of sorbent injection). For the purpose of presenting data, mercury emissions and sorbent injection rates are expressed in terms of the heat input to the boiler, in million or trillion Btu. This accounts for any differences in the heat input during each test.
In conjunction with these measurements of mercury emissions, the coal supply to the boiler is analyzed for its mercury content. This allows the effect of the sorbent to be expressed in terms of control efficiency, calculated from the mercury emissions and the amount of mercury present in the coal entering the boiler. This also addresses any variation in the mercury content of the coal supply to the boiler, so that another potential cause for variation in emissions is directly accounted for. Otherwise, changes in emissions due to variation in mercury content of coal could not be accounted for and would be incorrectly assumed to be due to changes in the rate of sorbent. The resulting data for the relationship between control efficiency for mercury emissions and the sorbent injection rate is then portrayed in graphical form with a trendline that summarizes this relationship and the performance of the particular sorbent for control of emissions.

b. The “transition point” is the theoretical point where the extensions of two straight lines on the performance curve for a particular sorbent, one representing the initial regime for control of mercury emissions and the other representing the terminal regime for control of emissions, would intersect. Effectively, the transition portion on the performance curve prepared from the evaluation of a particular sorbent is simplified to a single point, the “transition point.”

In this regard, the performance curves for control of mercury emissions for different sorbent materials and boilers show a consistent form with two different regimes for control effectiveness, an initial regime and a terminal regime, separated by a transition. In the initial regime, there is a relatively strong effect for control of mercury with injection of sorbent. This appears on the left side of the graph, as the trendline starts from the edge of the graph for the level of control for mercury that is achieved without injection of any sorbent. In the terminal regime, there is a much weaker effect for control of mercury by additional injection of sorbent material. This appears on the right side of the graph, as a nearly flat or flat trendline starting from the left side of the graph. In the transition separating the two regimes, the effect of sorbent injection gradually shifts from one regime to the other. Such transitions on graphs of this form are commonly referred to as “shoulders,” given the resemblance to a human shoulder.
Title V
AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name: Thoroughbred Generating Company, LLC
Mailing Address: 701 Market Street, 6th Floor, St. Louis, MO 63101

Source Name: Thoroughbred Generating Station
Mailing Address: P.O. Box 151, Central City, KY 42330

Source Location: Thoroughbred Generating Station
1380 Thoroughbred Drive, Central City, KY 42330

Permit Number: V-02-001 Revision 2
Log Number: 53619
SIC Code: 4911
Review Type: Title V/PSD
Source ID #: 21-177-00077
Oris Code: 55462

Region: Owensboro
County: Muhlenberg

Application
Complete Date: April 23, 2001
Issuance Date: October 11, 2002
Revision 1: December 6, 2002
Revision 2: February 17, 2005
Expiration Date: October 11, 2007

John S. Lyons, Director
Division for Air Quality
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>TITLE</th>
<th>DATE OF ISSUANCE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION A</td>
<td>PERMIT AUTHORIZATION</td>
<td>October 11, 2002</td>
<td>1</td>
</tr>
<tr>
<td>SECTION B</td>
<td>EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS</td>
<td>October 29, 2004</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>February 17, 2005</td>
<td></td>
</tr>
<tr>
<td>SECTION C</td>
<td>INSIGNIFICANT ACTIVITIES</td>
<td>October 29, 2004</td>
<td>34</td>
</tr>
<tr>
<td>SECTION D</td>
<td>SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS</td>
<td>October 29, 2004</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td></td>
<td>February 17, 2005</td>
<td></td>
</tr>
<tr>
<td>SECTION E</td>
<td>SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS</td>
<td>October 11, 2002</td>
<td>36</td>
</tr>
<tr>
<td>SECTION F</td>
<td>MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS</td>
<td>October 11, 2002</td>
<td>37</td>
</tr>
<tr>
<td>SECTION G</td>
<td>GENERAL CONDITIONS</td>
<td>December 6, 2002</td>
<td>40</td>
</tr>
<tr>
<td>SECTION H</td>
<td>ALTERNATE OPERATING SCENARIANS</td>
<td>October 11, 2002</td>
<td>45</td>
</tr>
<tr>
<td>SECTION I</td>
<td>COMPLIANCE SCHEDULE</td>
<td>October 11, 2002</td>
<td>46</td>
</tr>
<tr>
<td>SECTION J</td>
<td>TITLE IVACID RAIN</td>
<td>October 11, 2002</td>
<td>47</td>
</tr>
</tbody>
</table>
SECTION A – PERMIT AUTHORIZATION

Pursuant to a duly submitted application, the Kentucky Division for Air Quality hereby authorizes the construction and operation of the processing and air pollution control 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 emissions units without having first submitted a complete application to the permitting authority and received a permit for the planned activity, 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.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit 01 and 02 Pulverized Coal Fired Steam Electric Generating Units (SGU001 & SGU002)

Description:

Pulverized Coal Fired Boilers, equipped with Selective Catalytic Reduction (SCR); Electrostatic Precipitator (ESP); Wet Flue Gas Desulfurization (FGD); and Wet Electrostatic Precipitator (WESP)
Number two low sulfur (0.05% sulfur) fuel oil or natural gas used for startup and stabilization
Nominal rating 7,443 mmBtu/hour each
Construction Commence Date: Estimated 2002

Applicable Regulations:
401 KAR 59:016, New electric utility steam generating units.
401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Da, Standards of performance for electric utility steam generating units applicable to an emission unit with a capacity of more than 250 mmBTU per hour and commenced on or after September 19, 1978.
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.
401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances
40 CFR 63, Subpart B, National Emission Standards for Hazardous Air Pollutants
40 CFR 60, Appendix F, Quality Assurance Procedures
40 CFR 64, Compliance Assurance Monitoring
40 CFR Part 75, Continuous Emission Monitoring

Compliance with 40 CFR 75, Continuous Emissions Monitoring, shall constitute compliance with the monitoring and quality assurance requirements of 401 KAR 59:016 and 40 CFR 60, Appendix F.

1. Operating Limitations:
   a) Pursuant to 40 CFR 63.43(g)(2)(iv), the permittee shall comply with all applicable requirements contained in 40 C.F.R. part 63, subpart A.
   b) The permittee shall install control devices selected as BACT.

2. Emission Limitations:
   a) Pursuant to Regulations 401 KAR 59:016, Section 3(1)(b), and 401 KAR 51:017, particulate emissions shall not exceed 0.018 lb/mmBtu heat input from each unit based on a three-hour average. Pursuant to 401 KAR 59:016, Section 6(1), compliance with the 0.018 lb/mmBtu emission limitation shall constitute compliance with the 99% reduction requirement contained in 401 KAR 59:016, Section 3(1)(b).
   b) Pursuant to 401 KAR 59:016, Section 3(2), emissions from each unit shall not exceed twenty (20) percent opacity based on a six-minute average except that a maximum of twenty-seven (27) percent is allowed for not more than one (1) six (6) minute period per hour.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c) Pursuant to Regulations 401 KAR 59:016, Section 4(1) and 401 KAR 51:017, sulfur dioxide emissions shall not exceed 0.167 lbs/mmBtu from each unit based on a thirty (30) day rolling average.

d) Pursuant to 401 KAR 59:016, Section 4(1) and 401 KAR 51:017, sulfur dioxide emission shall not exceed 0.41 lbs/mmBtu, based on 24 hr block average. See Section D for procedures to be used to revised this limitation after optimization study.

e) Pursuant to Regulations 401 KAR 51:017, carbon monoxide emissions shall not exceed 0.10 lbs/mmBtu from each unit based on a thirty (30) day rolling average.

f) Pursuant to Regulations 401 KAR 59:016, Section 5(1)(c) and 401 KAR 51:017, nitrogen oxides emissions shall not exceed 0.08 lbs/mmBtu from each unit based on a thirty (30) day rolling average. Pursuant to 401 KAR 59:016, Section 6(2), compliance with the 0.08 lb/mmBtu emission limitation shall constitute compliance with the 65% reduction requirement contained in 401 KAR 59:016, Section 5(2).

g) Pursuant to Regulations 401 KAR 51:017, VOC emissions shall not exceed 0.0072 lbs/mmBtu from each unit based on a thirty (30) day rolling average. Compliance with this limit shall be demonstrated by compliance with Subsection 2(e) above.

h) Pursuant to Regulations 401 KAR 51:017, beryllium emissions shall not exceed 0.000000944 lbs/mmBtu from each unit based on a quarterly average.

i) Pursuant to Regulations 401 KAR 51:017, sulfuric acid mist emissions shall not exceed 0.00497 lbs/mmBtu from each unit based on a thirty (30) day rolling average.

j) Pursuant to Regulations 401 KAR 51:017, hydrogen fluoride emissions shall not exceed 0.000159 lbs/mmBtu from each unit based on a thirty (30) day rolling average.

k) Pursuant to Regulations 401 KAR 51:017, mercury emissions shall not exceed 0.00000321 lbs/mmBtu from each unit based on a quarterly average.

l) Pursuant to Regulations 401 KAR 51:017, lead emissions shall not exceed 0.00000386 lbs/mmBtu from each unit based on a quarterly average.

m) Pursuant to 40 CFR. 63.43(d), case-by-case MACT determination, each pulverized coal fired steam electric generating unit, shall not exceed the following hazardous air pollutants (HAP) emission limitations listed below:
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

<table>
<thead>
<tr>
<th>HAP</th>
<th>Emissions Limitation (tons/yr.-per unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC (HAPs)</td>
<td>5.154</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.1047</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>26.90</td>
</tr>
<tr>
<td>Hydrogen Fluoride</td>
<td>5.1684</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.0288</td>
</tr>
<tr>
<td>Beryllium</td>
<td>0.0308</td>
</tr>
<tr>
<td>Chromium</td>
<td>0.3419</td>
</tr>
<tr>
<td>Manganese</td>
<td>0.6825</td>
</tr>
<tr>
<td>Lead</td>
<td>0.126</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.0119</td>
</tr>
</tbody>
</table>

3. Testing Requirements:

a) Pursuant to 401 KAR 50:055, Section 2(1)(a) the permittee shall demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of each emission unit. Opacity data from the Continuous Opacity Monitor (COM) during the performance test for particulate shall be correlated with the particulate emissions rate to establish an average opacity level pursuant to Condition 4.b below.

b) If no additional stack tests are performed pursuant to Condition 4.b, the permittee shall conduct a performance test for particulate emissions annually after demonstrating compliance with the allowable standard.

c) Pursuant to 401 KAR 50:045, Section 2 and 50:015, Section 1, the permittee shall determine the opacity of emissions from the stack by EPA Reference Method 9 annually, or more frequently if requested by the Division.

d) See Section D.

e) Case-by-Case MACT Requirements

Pursuant to 40 CFR 63.43(g)(2)(ii), case-by-case MACT determination, the permittee shall demonstrate compliance with the applicable emissions limitations for the following HAPs in the table below.
f) Pursuant to 40 CFR 63.43(g)(2)(ii) case-by-case MACT determination, the permittee shall demonstrate compliance with these emissions limitations within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after initial startup of these emissions units. See Section G(d)5

g) Pursuant to 401 KAR 52:020, Section 10, during the initial compliance test, the permittee shall take a representative sample of the fuel “as fired” and analyze it to determine the HAP content in the fuel. This information shall be used to establish a correlation between the sample’s HAP content and HAP emissions for monitoring purposes, except for VOC(HAPs). The permittee shall demonstrate compliance with these emissions limits annually. This testing shall be used to validate the correlation between composite sample HAP content and HAP emissions, except for VOC(HAPs).

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 52:020, 401 KAR 59:016, Section 7; and 401 KAR 59:005, Section 4, the permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, carbon monoxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions. Oxygen or carbon dioxide shall be monitored at each location where sulfur dioxide or nitrogen oxides emissions are monitored. The owner or operator shall ensure the continuous emission monitoring systems are in compliance with the requirements of 401 KAR 59:005, Section 4. The continuous opacity monitor (COM) may be located after the ESP and before the WFGD to avoid complications with installation in the wet stack.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(1), to meet the periodic monitoring requirement for particulate, the permittee shall use a continuous opacity monitor (COM). The average opacity level determined pursuant to condition 3.a above, plus 5% opacity will become the opacity trigger level. Excluding the startup, shut down, and once per hour exemption periods, if any six-minute average opacity (averaged over a period of 3 hours) value exceeds the opacity trigger level, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the COM system and make any necessary repairs. If five (5) percent or greater of COM data (excluding startup, shut down, and malfunction periods, data averaged over a three hour period) recorded in a calendar quarter show excursions above the opacity trigger level, the permittee shall perform a stack test in the following calendar quarter to demonstrate compliance with the particulate standard while operating at representative conditions. The permittee shall submit a compliance test protocol as required by condition Section G(a)(17) of this permit 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.

c) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(1), to meet the periodic monitoring requirement for opacity, the permittee shall use a continuous opacity monitor (COM). The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a monthly basis and maintain a log of the observations. If any visible emissions are seen, then opacity must be determined using Reference Method 9, or by accepting the concurrent readout from the COM and perform an inspection of the control equipment and make any necessary repairs. Observations shall revert to weekly if visible emissions, which would trigger Reference Method 9 determinations or equipment repairs, are observed during any monthly observation. Weekly observations shall continue until such time that no visible emissions, which would trigger Reference Method 9 determinations or equipment repairs, are observed during any three consecutive week period.

d) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(2), to meet the periodic monitoring requirement for sulfur dioxide, the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any 30 day rolling average or 24 block average sulfur dioxide value exceeds that standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or the CEM system and make any necessary repairs as soon as practicable.

e) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(3), to meet the periodic monitoring requirement for nitrogen oxide, the permittee shall use a continuous emission monitor (CEM). Excluding the startup and shut down periods, if any 30 day rolling average nitrogen oxide value exceeds the standard, the permittee shall, as appropriate, initiate an inspection of the control equipment and/or CEM system and make any necessary repairs or take any corrective actions as soon as practicable.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) Pursuant to Regulations 401 KAR 52:020, Section 10, and 401 KAR 51:017, to meet the periodic monitoring requirement for CO, the permittee shall use a continuous emission monitor (CEM).

g) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(5), all the continuous emission monitoring systems shall be operated and data shall be recorded during all periods of operation of the emissions units including periods of startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.

h) Pursuant to 401 KAR 52:020 and 401 KAR 59:016, Section 7(6), when emission data are not obtained because of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall obtain emission data by using other monitoring systems as approved by the Division or the reference methods as described in 401 KAR 59:016, Section 7(8) to provide emission data for a minimum of eighteen hours in at least twenty-two out of thirty successive boiler operating days.

i) Pursuant to 401 KAR 59:016, Section 7(9), the following procedures shall be used to conduct monitoring system performance evaluations and calibration checks as required under 401 KAR 59:005, Section 4(3).

1. Reference Method 6 or 7, as applicable shall be used for conducting performance evaluations of sulfur dioxide and nitrogen oxides continuous emission monitoring systems.

2. Sulfur dioxide or nitrogen oxides, as applicable, shall be used for preparing calibration mixtures under Performance Specification 2 of Appendix B to 40 CFR 60 incorporated by reference in 401 KAR 50:015.

3. The span value for the continuous monitoring system for measuring opacity shall be between sixty (60) and eight (80) percent and the continuous monitoring system for measuring nitrogen oxides shall be 1,000 ppm.

4. The span value for the continuous monitoring system for measuring sulfur dioxide at the outlet of the control device shall be 50 percent of the maximum estimated hourly potential emissions of the fuel fired, or span values as specified in 40 CFR 75, Appendix A.

j) Pursuant to 401 KAR 52:020, Section 10, the permittee shall take a sample of the fuel “as fired” to the PCs on a daily basis. The samples taken on a daily basis shall be uniformly mixed to form a composite sample analyzed once per calendar quarter to determine mercury, arsenic, beryllium, chromium, magnesium, lead, cadmium, fluorine and chlorine content. This data, along with the baseline data established during the initial compliance test, shall be used to demonstrate compliance with the emission limits for these pollutants.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

k) CAM Requirements

The permittee shall use Sulfur Dioxide (SO₂) and Nitrogen Oxides (NOₓ) Continuous Emissions Monitors (CEMs) as continuous compliance determination methods to preclude applicability of 40 CFR 64 for those specific parameters, and to demonstrate compliance with Best Available Control Technology (BACT) limits contained in this permit.

l) Pursuant to 40 CFR 64.6, monitoring for Particulate Matter (PM), Hydrogen Fluoride (HF) and H₂SO₄ is shown in the table below

<table>
<thead>
<tr>
<th>Applicable CAM Requirement</th>
<th>PM/PM₁₀</th>
<th>HF</th>
<th>H₂SO₄</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Requirements</td>
<td>0.018 lb/mmBtu</td>
<td>0.000159 lb/mmBtu</td>
<td>0.00497 lb/mmBtu</td>
</tr>
<tr>
<td></td>
<td>20% Opacity</td>
<td>30-day rolling average</td>
<td>30-day rolling average</td>
</tr>
<tr>
<td>Monitoring Methods and Location</td>
<td>Initial Source Test &amp; (1) installation of a COM at outlet of the dry ESP and monitoring of the ESP/WESP electrical field and other relevant parameters identified during initial testing* or (2) visual observation of plume from stack</td>
<td>SO₂ CEMs plus initial source test, coal sampling</td>
<td>SO₂ CEMs plus initial source test, coal sampling</td>
</tr>
<tr>
<td>Indicator Range</td>
<td>(1) Initial source testing to establish COM and equipment parameter indicator ranges, including the ESP/WESP electrical fields, as appropriate or (2) Initial source testing to establish compliance with the PM limit at 20% opacity. The permittee must conduct weekly stack observations. If visible emissions are seen, the permittee must conduct a Method 9 observation to determine the opacity of the emissions.</td>
<td>Initial source testing to establish correlation to SO₂ and coal quality, then establish SO₂ CEM and coal range appropriate</td>
<td>Initial source testing to establish correlation to SO₂ and coal quality, then establish SO₂ CEM and coal range appropriate</td>
</tr>
<tr>
<td>Data Collection Frequency</td>
<td>(1) Continuous COM and control device operating parameters or (2) weekly observations</td>
<td>Continuous CEM, quarterly coal composites</td>
<td>Continuous CEM, quarterly coal composites</td>
</tr>
<tr>
<td>Averaging Period</td>
<td>(1)Opacity – 6 minute averages COM control device parameters – 3 hours or (2) Visible Emission Surveys – 1 minute; Method 9</td>
<td>30-day</td>
<td>30-day</td>
</tr>
<tr>
<td>Recordkeeping</td>
<td>COM data system records and control device parameters will be maintained for a period of 5 years or visible observation records and method 9 observations will be kept in a designated logbook and maintained for a period of 5 years.</td>
<td>Coal quality information will be kept in a designated log book, plus CEM data system records</td>
<td>Coal quality information will be kept in a designated log book, plus CEM data system records</td>
</tr>
</tbody>
</table>
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

| QA/QC | COM will be maintained and operated in accordance with 401KAR 59:005 / 40CFR 60 Appendix B and/or other requirements as applicable, ESP/WESP monitored parameters will be maintained and operated in accordance with manufacturer recommendations; or records of method 9 certifications will be maintained | FGD/WESP will be maintained and operated in accordance with manufacturer recommendations | FGD/WESP will be maintained and operated in accordance with manufacturer recommendations |

* 40 CFR 60, Subpart Da, allows the alternative location of COMS, in cases where the stack is considered to be wet (as the TGS stack will be upstream of the wet scrubber after the particulate control device). In the case of TGS, the particulate control consists of the dry ESP prior to the wet scrubber and a WESP after the wet scrubber. Therefore, COMS cannot be installed in TGS’s wet stacks due to the inaccurate opacity readings. Hence, TGC proposes to install COMS at the outlets of the ESPs, and to identify appropriate PM operating parameters for the ESPs and WESPs (such as electrical field monitoring or operation or other parameters) within 180 days after initial source testing, with appropriate collection frequencies, recordkeeping, indicator ranges and QA/QC. In the alternative, TGC proposes to use periodic visible observations with requirements to use method 9 surveys as needed.

m) Case-by-Case MACT and CAM Requirements

Pursuant to 40 CFR 63.43 (g)(2)(ii), case-by-case MACT determination, and 40 CFR 64.6(c)(1), the permittee shall conduct the following monitoring to assure compliance with the applicable requirements:

<table>
<thead>
<tr>
<th>HAP</th>
<th>Monitoring Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC (HAPs)</td>
<td>The continuous compliance monitoring method used to assess compliance with the carbon monoxide emission limitation shall be used as an indicator of good combustion practices. Compliance with the carbon monoxide emission limitation assures compliance with the VOC (HAPs) emission limit.</td>
</tr>
</tbody>
</table>
| Mercury | The permittee shall take a sample of fuel “as fired” to the PCs on a daily basis. The samples taken on a daily basis shall be uniformly mixed to form a composite sample analyzed to determine mercury content on a quarterly basis. This data, along with the baseline data established during the initial compliance and subsequent tests, shall be used to demonstrate compliance with the emission limits for these pollutants.  

[The pH level and liquid flow rate shall be monitored in the wet-flue gas desulfurization unit as an indicator of proper removal of mercury from the exhaust stream.  

The wet electrostatic precipitator voltage shall be monitored as an indicator of proper operation and removal of mercury from the exhaust stream.] |
| Hydrogen Chloride | The continuous compliance monitoring method used to assess compliance with the sulfur dioxide emission limitations shall be used to assure compliance with the hydrogen chloride emission limit. Compliance with the sulfur dioxide emission limitations assures compliance with the hydrogen chloride emissions limit. |
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

<table>
<thead>
<tr>
<th>Hydrogen Fluoride</th>
<th>The continuous compliance monitoring method used to assess compliance with the sulfur dioxide emission limitations shall be used to assure compliance with the hydrogen fluoride emission limit. Compliance with the sulfur dioxide emission limitations assures compliance with the hydrogen fluoride emissions limit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic, Beryllium, Chromium, Manganese, Lead, and Cadmium</td>
<td>The permittee shall take a sample of fuel “as fired” to the PCs on a daily basis. The samples taken on a daily basis shall be uniformly mixed to form a composite sample analyzed to determine arsenic, beryllium, chromium, manganese, lead and cadmium content on a quarterly basis. This data, along with the baseline data established during the initial compliance and subsequent tests, shall be used to demonstrate compliance with the emission limits for these pollutants.</td>
</tr>
<tr>
<td></td>
<td>[The wet and dry electrostatic precipitator voltage shall be monitored as an indicator of proper operation and removal of arsenic, beryllium, chromium, manganese, lead and cadmium from the exhaust stream.]</td>
</tr>
</tbody>
</table>

n) Pursuant to 40 CFR 63.43 (g)(2)(ii), case-by-case MACT determination and 40 CFR 64.6(c)(1), the permittee shall conduct a compliance demonstration annually to validate the correlation between the coal samples HAP content and HAP emissions. The test procedure shall consist of taking samples of coal “as-fired” concurrent with the compliance demonstration to correlate the HAP content of coal with the HAP emissions. The coal samples shall be analyzed for HAP content and the correlation with the HAP emissions shall be established based on the analyzed HAP content and stack emissions.

5. **Specific Record Keeping Requirements:**

   a) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator of the indirect heat exchanger shall maintain a file of all measurements, including continuous emission monitoring system, monitoring device, and performance testing measurements; all continuous emission 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.

   b) Pursuant to 401 KAR 59:005, Section 3(2), the owner or operator of this unit shall maintain the 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 emission monitoring system or emission monitoring device is inoperative.

   c) Pursuant to 401 KAR 50:055, Section 4, the permittee shall compute and record percentage of the COM data (excluding startup, shut down, and malfunction data) showing excursions above the opacity trigger level in each calendar quarter.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d) Pursuant to regulation 401 KAR 52:020, Section 10 and 401 KAR 50:045, Section 6, the permittee shall maintain the results of all compliance tests.

e) Case-by-Case MACT and CAM Requirements
   1. Pursuant to 40 CFR 63.43(g)(2)(ii), the permittee shall keep quarterly records of the sample’s HAP analyses. The permittee shall keep these records according to the general recordkeeping requirements specified in Section F.1. and F.2. of this permit.

   2. Pursuant to 40 CFR 63.43(g)(2)(ii), and 40 CFR 64.9(b), the permittee shall record continuously for the wet limestone scrubber the following:
      a. The scrubber liquid pH at the liquor inlet;
      b. The liquid flow rate in gallons per minute at the pump discharge or scrubber liquor inlet.

   3. Pursuant to 40 CFR 63.43(g)(2)(ii), and 40 CFR 64.9(b), the permittee shall continuously record voltages for the wet electrostatic precipitator and dry electrostatic precipitator.

6. Specific Reporting Requirements:

   a) Pursuant to 401 KAR 59:005, Section 3(3), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

      1) The magnitude of the excess emission computed in accordance with the 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

      2) All hourly averages shall be reported for sulfur dioxide, carbon monoxide and nitrogen oxides monitor. The hourly averages shall be made available in the format specified by the Division.

      3) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4) The date and time identifying each period during which continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

5) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

6) For sulfur dioxide, carbon monoxide and nitrogen oxides, all information listed in 401 KAR 59:016, Section 9(2)(a) through (i), shall be reported to the Division for each twenty-four (24) hour period.

7) If the minimum quantity of emission data as required by 401 KAR 59:016, Section 7 is not obtained for any thirty successive boiler operating days, the permittee shall report all the information listed in 401 KAR 59:016, Section 9(3) for that thirty (30) day period.

8) If any sulfur dioxide standards as specified in 401 KAR 59:016, Section 4(a and b) are exceeded during emergency conditions because of control system malfunction, the permittee shall submit a signed statement including all information as described in 401 KAR 59:016, Section 9(4).

9) For any periods for which opacity, sulfur dioxide or nitrogen oxides emissions data are not available, the permittee shall submit a signed statement pursuant to 401 KAR 59:016, Section 9(6) indicating if any changes were made in the operation of the emission control system during the period of data unavailability. Operations of control system and emissions units during periods of data unavailability are to be compared with operation of the control system and emissions units before and following the period of data unavailability.

10) The permittee shall submit a signed statement including all information as described in 401 KAR 59:016, Section 9(7).

11) Pursuant to 401 KAR 59:016, Section 9(8), for the purposes of the reports required under 401 KAR 59:005, Section 4, periods of excess emissions are defined as all six (6) minute periods during which the average opacity exceeds the applicable opacity standards as specified in 401 KAR 59:016, Section 3(2). Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Division each calendar quarter. Continuous emissions monitoring for sulfur dioxide and nitrogen oxide shall be certified, operated and maintained in accordance with the applicable provisions of 40 CFR Part 75, compliance with which shall be deemed compliance with monitoring provisions of 40 CFR 60.47a
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to 401 KAR 59:005, Section 3(3), the permittee shall report the number of excursions (excluding startup, shut down, malfunction data) above the opacity trigger level, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions above the opacity trigger level in each calendar quarter to the Division’s Regional Office.

c) CAM Requirements
Pursuant to 40 C.F.R. §64.9(a) the permittee shall report the following information according to the general reporting requirements specified in Section F.5. of this permit:

a. Number of exceedances or excursions;
b. Duration of each exceedance or excursion;
c. Cause of each exceedance or excursion;
d. Corrective actions taken on each exceedance or excursion;
e. Number of monitoring equipment downtime incidents;
f. Duration of each monitoring equipment downtime incident;
g. Cause of each monitoring equipment downtime incident;
h. Description of actions taken to implement a quality improvement plan and upon completion of the quality improvement plan, documentation that the plan was completed and reduced the likelihood of similar excursions or exceedances.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 2 (5), the SCR ESP, WFGD, and WESP, shall be operated to maintain compliance with permitted emission limitations, in accordance with manufacturer’s specifications and / or standard operating practices.

b) Pursuant to 401 KAR 50:055, Section 2 (1)(a), a compliance demonstration for the FGD, flue gas desulfurization system, must be completed within 180 days of start-up. If compliance with the 0.167 lb/mmBtu sulfur dioxide emissions limit is not met within this initial compliance period, operations at the facility must be suspended until all necessary modifications to control equipment are completed. During this period, the facility can be in operation only for the purpose of demonstrating compliance.

c) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

d) See Section E for further requirements.

e) Case-by-Case MACT Requirements
Pursuant to 40 CFR 63.43(d), the permittee shall install and operate the following control technology to meet the case-by-case MACT emission limitations while emission units are in operation.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

<table>
<thead>
<tr>
<th>HAP</th>
<th>Control Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOC (HAPs)</td>
<td>Good combustion practices</td>
</tr>
<tr>
<td>Mercury</td>
<td>Low NOx burners, selective catalytic reduction (SCR), electrostatic precipitator, wet flue gas desulfurization and wet electrostatic precipitator with 80% (aprox) combined control efficiency</td>
</tr>
<tr>
<td>Acid Gases (Hydrogen Chloride and Hydrogen Fluoride)</td>
<td>Wet limestone scrubber and wet electrostatic precipitator with 98% (aprox) combined control efficiency</td>
</tr>
<tr>
<td>Metals (Arsenic, Beryllium, Cadmium Chromium, Lead and Manganese)</td>
<td>Wet and Dry Electrostatic Precipitator with 99.5 to 99.9% control efficiency for PM (aprox.)</td>
</tr>
</tbody>
</table>

Control Equipment Operating Conditions for the wet limestone scrubber:

Pursuant to 40 CFR 63.43(g)(2)(ii), case-by-case MACT determination and 40 CFR 64.6(c)(2), the permittee shall maintain the liquor pH level within the range that demonstrated compliance in the most recent compliance demonstration. The permittee must maintain the liquid flow rate within the range that demonstrated compliance in the most recent compliance demonstration.

Control Equipment Operating Conditions for the wet electrostatic precipitator and dry electrostatic precipitator:

Pursuant to 40 CFR 63.43(g)(2)(ii), case-by-case MACT determination and 40 CFR 64.6(c)(2), the permittee shall maintain the wet electrostatic precipitator and dry electrostatic precipitator voltage equal to or above the level that demonstrated compliance in the most recent compliance demonstration.
Emissions Unit 03  Auxiliary Boiler AB001

**Description:**
300 mmBtu/hr low sulfur (0.05% sulfur) diesel fired auxiliary boiler
Construction Commenced Date: estimated 2002

**Applicable Regulations:**
- 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, incorporated by reference in regulation 401 KAR 60:005, Section 3(1)(b).
- 401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. **Operating Limitations:**

   The auxiliary boiler shall only operate during start-up periods of one utility boiler or when no utility boilers are in operation. The auxiliary boiler shall not operate more than 500 hours per twelve (12) consecutive months [401 KAR 51:001, Section 1 (142)].

2. **Emission Limitations:**

   a) Pursuant to Regulations 401 KAR 60:005, Section 3(1)(b), 401 KAR 59:015, Section 4(1)(b), and 401 KAR 51:017, particulate emissions shall not exceed 0.06 lb/mmBtu heat input based on a three-hour average.

   b) Pursuant to 401 KAR 59:015, Section 4(2)(a), emissions from the utility boiler shall not exceed twenty (20) percent opacity based on a six-minute average except that a maximum of twenty-seven (27) percent is allowed for not more than one (1) six (6) minute period per hour.

   c) Pursuant to Regulations 401 KAR 60:005, Section 3(1)(b); 401 KAR 59:015, Section 5(1)(b); and 401 KAR 51:017, sulfur dioxide emissions shall not exceed 0.05 lbs/mmBtu based on a three-hour average.

   d) Pursuant to Regulations 401 KAR 51:017, carbon monoxide emissions shall not exceed 0.06 lbs/mmBtu based on a thirty (30) day rolling average.

   e) Pursuant to Regulations 401 KAR 60:005, Section 3(1)(b); 401 KAR 59:015, Section 6(1)(b); and 401 KAR 51:017, nitrogen oxides emissions shall not exceed 0.12 lbs/mmBtu based on a three-hour average.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f) Pursuant to Regulations 401 KAR 51:017, VOC emissions shall not exceed 0.03 lbs/mmBtu based on a thirty (30) day rolling average.

3. Testing Requirements:
   a) Pursuant to Regulations 401 KAR 59:005, Section 2(1) and 401 KAR 59:015, Section 8, the permittee shall demonstrate compliance with the applicable emission standards within sixty (60) days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility.

   b) Pursuant to 401 KAR 59:015, Section 8(1)(f), if the unit has operated during the previous 12 consecutive months, the permittee shall determine the opacity of emissions from the stack by EPA Reference Method 9 annually, or more frequently if requested by the Division.

   c) The permittee shall conduct a performance test for particulate emissions annually after demonstrating compliance with the allowable standards.

   d) See Section D.

4. Specific Monitoring Requirements:
   a) Pursuant to 401 KAR 52:020; 401 KAR 60:005; 401 KAR 59:015, Section 7; 401 KAR 51:017; and 401 KAR 59:005, Section 4, the permittee shall install, calibrate, maintain, and operate continuous emission monitoring systems or use other monitoring methods as allowed by regulation, for measuring the opacity of emissions, sulfur dioxide emissions, carbon monoxide emissions, nitrogen oxides emissions and either oxygen or carbon dioxide emissions. Oxygen or carbon dioxide shall be monitored at each location where sulfur dioxide or nitrogen oxides emissions are monitored. The owner or operator shall ensure the continuous emission monitoring systems are in compliance with the requirements of 401 KAR 59:005, Section 4.

   b) Pursuant to 401 KAR 52:020; 401 KAR 51:017; and 401 KAR 59:015, to meet the periodic monitoring requirement for sulfur dioxide, the permittee shall use a continuous emission monitor (CEM).

   c) Pursuant to 401 KAR 52:020; 401 KAR 51:017; and 401 KAR 59:015, to meet the periodic monitoring requirement for nitrogen oxide, the permittee shall use a continuous emission monitor (CEM).

   d) Pursuant to 401 KAR 52:020; and 401 KAR 51:017, to meet the periodic monitoring requirement for CO, the permittee shall use a continuous emission monitor (CEM).

   e) Pursuant to 401 KAR 52:020; 401 KAR 59:015; and 401 KAR 51:017 all the continuous emission monitoring systems shall be operated and data shall be recorded during all periods of operation of the emissions units including periods of
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.

f) Pursuant to 401 KAR 59:015, Section 7(3), the following procedures shall be used to conduct monitoring system performance evaluations and calibration checks as required under 401 KAR 59:005, Section 4(3).

g) Pursuant to 401 59:015, Section 7(3)(a), Reference Method 6 or 7, as applicable shall be used for conducting performance evaluations of sulfur dioxide and nitrogen oxides continuous emission monitoring systems.

h) Pursuant to 401 59:015, Section 7(3)(b), Sulfur dioxide or nitrogen oxides, as applicable, shall be used for preparing calibration mixtures under Performance Specification 2 of Appendix B to 40 CFR 60 filed by reference in 401 KAR 50:015.

i) Pursuant to 401 59:015, Section 7(3)(c), The span value for the continuous monitoring system for measuring opacity shall be 80, 90, or 100 percent and the continuous monitoring system shall be 500 ppm for measuring nitrogen oxides and 1,000 ppm for measuring sulfur oxides.

j) The permittee shall monitor the hours of operation during each twelve (12) consecutive months.

5. Specific Record Keeping Requirements:

a) Pursuant to 401 KAR 59:005, Section 3(4), the owner or operator of the indirect heat exchanger 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.

b) Pursuant to 401 KAR 59:005, Section 3(2), the owner or operator of this unit shall maintain the 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.

c) The permittee shall maintain the results of all compliance tests.

d) The permittee shall maintain records of hours of operation during each twelve (12) consecutive months.
6. **Specific Reporting Requirements:**

a) Pursuant to 401 KAR 59:005, Section 3(3), minimum data requirements which follow shall be maintained and furnished in the format specified by the Division. Owners or operators of facilities required to install continuous monitoring systems shall submit for every calendar quarter a written report of excess emissions (as defined in applicable sections) to the Division. All quarterly reports shall be postmarked by the thirtieth (30th) day following the end of each calendar quarter and shall include the following information:

1. The magnitude of the excess emission computed in accordance with the 401 KAR 59:005, Section 4(8), any conversion factors used, and the date and time of commencement and completion of each time period of excess emissions.

2. All hourly averages shall be reported for sulfur dioxide, carbon monoxide, and nitrogen oxides monitors. The hourly averages shall be made available in the format specified by the Division.

3. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

4. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

5. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

b) The permittee shall report the number of excursions (excluding startup, shut down, malfunction data) above the opacity trigger level, date and time of excursions, opacity value of the excursions, and percentage of the COM data showing excursions above the opacity trigger level in each calendar quarter to the Division Regional Office.

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

a) Pursuant to 401 KAR 50:055, Section 5, the boiler shall be operated in accordance with manufacturer’s specifications and / or standard operating practices.

b) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 04  Coal Handling Systems

Description:

Machine Point 01 - CDC001  Convey and Transfer (Stockout)
Machine Point 02 - CDC002a  Convey and Transfer (Reclaim Primary)
Machine Point 03 - CDC002b  Convey and Transfer (Reclaim Secondary)
Machine Point 04 - CDC003  Crusher Tower and Convey
Machine Point 05 - CDC004  Convey and Plant Surge Bin
Machine Point 06 - CDC005  Silo 1 East
Machine Point 07 - CDC006  Silo 1 West
Machine Point 08 - CDC007  Silo 2 East
Machine Point 09 - CDC008  Silo 2 West
Machine Point 10 - CFD004  Stacker/Reclaim(while in reclaim operation)
Machine Point 11 - CFD005  Convey/Transfer(while in reclaim operation)
Machine Point 12 - CFD007  Secondary Reclaim Endloader

Control Equipment:

Enclosures and Baghouse  Machine Points 01 – 05
Bin Filters  Machine Points 06 – 09
Partial Enclosure/Low Drop/ Filter  Machine Point 11

Operating Rate:

2000 tons/hour (each transfer)  Machine Point 01 - 4 transfers
Machine Point 10 -12

1000 tons/hour (each transfer)  Machine Point 02 - 2 transfers
Machine Point 04 – 8 transfers
Machine Point 05 – 6 transfers
Machine Point 06 – 3 transfers
Machine Point 07 – 3 transfers
Machine Point 08 – 3 transfers
Machine Point 09 – 3 transfers

500 tons/hour (each transfer)  Machine Point 03 – 2 transfers

Construction Commenced Date: Estimated Early 2002

Applicable Regulations:

401 KAR 60:005, incorporation by reference 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

1. Operating Limitations:

Pursuant to 401 KAR 51:017, the permitee shall install control methods selected as BACT.

2. Emission Limitations:

a) Pursuant to 40 CFR 60.252, the owner or operator shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.

b) Pursuant to 401 KAR 51:017, the baghouse utilized shall exhibit a particulate design control efficiency of at least 99%.

3. Testing Requirements:

Pursuant to 401 KAR 60:005, incorporating by reference 40 CFR 60.254, the permittee shall determine the opacity of emissions from each stack by EPA Reference Method 9 annually, and procedures in 40 CFR 60.8 or more frequently if requested by the Division.

4. Specific Monitoring Requirements:

The permittee shall perform a qualitative visual observation of the opacity of emissions from each emission point on a weekly basis and maintain a log of the observations. If visible emissions from any emission point are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

5. Specific Record Keeping Requirements:

a) The permittee shall maintain the records of amount of coal received and processed.

b) The permittee shall maintain the results of all compliance tests. The permittee shall record each week, the date and time of each observation and opacity of visible emissions monitoring. In case of exceedances, the permittee must record the reason (if known) and the measures taken to minimize or eliminate exceedances.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7 and 8.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

7. Specific Control Equipment Operating Conditions:

   a) Pursuant to 401 KAR 50:055, Section 5, the enclosures/partial enclosures, baghouse, bin filters, low-pressure drop and telescopic chutes shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 40 CFR 60, Subpart Y and in accordance with manufacturer's specifications and/or standard operating practices.

   b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

   c) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 05  Coal Handling System

Description:

Machine Point 01 - CFD001  Stacker Operation
Machine Point 02 - CFD002  Stacker Operation
Machine Point 03 - CFD003  Stacker/Reclaim (while in stacker operation)
Machine Point 04 - CFD006  Secondary Stacker

Control Equipment:
  Partial Enclosures/Low Drops  Machine Points 01 - 04
  Telescopic Chute and Low Drop  Machine Point 03 and 04

Operating Rate:
  2000 tons/year  Machine Points 01 - 04

Construction Commenced Date: Estimated 2002

Applicable Regulations:

401 KAR 63:010, Fugitive emissions
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

   a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

      1. Application and maintenance of asphalt, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dust;
      2. Installation and use of compaction or other measures to suppress the dust emissions during handling;

   b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

   c) Pursuant to 401 KAR 51:017, the permittee shall install control methods selected as BACT.

2. Emission Limitations:

   None
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. **Testing Requirements:**

   None

4. **Specific Monitoring Requirements:**

   The permittee shall monitor fugitive emissions from partial enclosures, low-pressure drop and telescopic chutes weekly as required by Best Available Control Technology (BACT)

5. **Specific Record Keeping Requirements:**

   a) The permittee shall maintain records of the amount of coal received and processed.

   b) The permittee shall maintain a log of the date, time and results of the monitoring required in subsection 4 above

6. **Specific Reporting Requirements:**

   See Section F, Conditions 5, 6, 7 and 8.

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

   a) Pursuant to 401 KAR 50:055, Section 5, the partial enclosures, low-pressure drop and telescopic chutes shall be maintained, operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010, and in accordance with manufacturer’s specifications and/or standard operating practices

   b) See Section E for further requirements
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 06  Coal Piles

Description:

- Machine Point 01 – 14a North Coal Storage Pile
- Machine Point 02 – 14a South Coal Storage Pile
- Machine Point 03 – 14b Secondary Pile
- Machine Point 04 – 14c Emergency Pile
- Machine Point 05 – 14d Endloaders

Control Equipment: Compaction

Operating Rate:

- 7.72 acres Machine Point 01
- 5.65 acres Machine Point 02
- 1.84 acres Machine Point 03
- 0.72 acres Machine Point 04
- 2000 tons/hour Machine Point 05

Construction Commenced Date: Estimated 2002

Applicable Regulations:

401 KAR 63:010, Fugitive Emissions
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

   a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

      1. Application and maintenance of asphalt, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dust;

      2. Installation and use of compaction or other measures to suppress the dust emissions during handling;

   b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

   c) Pursuant to 401 KAR 51:017, the permittee shall install control methods selected as BACT.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:
   None

3. Testing Requirements:
   None

4. Specific Monitoring Requirements:
   The permittee shall monitor fugitive emissions from the Coal Piles weekly as required by Best Available Control Technology (BACT). See above.

5. Specific Record Keeping Requirements:
   a) The permittee shall maintain the records of amount of coal received and processed.
   b) The permittee shall maintain a log of the date, time and results of the monitoring required in subsection 4 above.

6. Specific Reporting Requirements:
   See Section F, Conditions 5, 6, 7 and 8.

7. Specific Control Equipment Operating Conditions:
   a) Pursuant to 401 KAR 50:055, Section 5, the Coal Piles shall be maintained, to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010, and standard operating practices.
   b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.
   c) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 07 FGD Reagent Prep Handling

Description:
Machine Point 01 - LDC001 Convey/Transfer Structure 1
Machine Point 02 - LDC002 Convey/Transfer Structure 2
Machine Point 03 - LDC003 Convey/Transfer Structure 3
Machine Point 04 - LDC005 Storage Bins (2)
Machine Point 05 - LFD003 Convey to Pile (Stockout)
Machine Point 06 - LFD004 Pile to Belt (Reclaim)

Control Equipment:
Enclosures / Filters Machine Points 01 – 03 & 06

Operating Rate:
400 tons/hour (each) Machine Points 01 – 06

Construction Commenced Date: Estimated Early 2002

Applicable Regulations:

401 KAR 60:670, incorporating by reference 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, as modified by Section 3 of 401 KAR 60:670

401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

Pursuant to 401 KAR 51:017, the permittee shall install control equipment selected as BACT.

2. Emission Limitations:

a) Pursuant to Regulations 401 KAR 51:017, and 401 KAR 60:670, emissions of particulate shall be controlled by filters.

b) Pursuant to 401 KAR 60:670, specifically 40 CFR 60.672(a), emissions of particulate shall not exceed 0.05 gr/dscm and shall not exhibit greater than 7% opacity.

c) Pursuant to 401 KAR 60:607, specifically 40 CFR 60.672(b), emissions of particulate shall not exhibit greater than 10% opacity (Mp 01-03, 06).

3. Testing Requirements:

a) Pursuant to 401 KAR 60:670, specifically 40 CFR 60.675(b)(2), the owner and/or operator shall use EPA Reference Method 9 and the procedures in 40 CFR 60.11 to determine opacity, annually.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b) Pursuant to Regulations 401 KAR 60:670 and 40 CFR 60.675(b)(1), EPA Reference Method 5 or Method 17 shall be performed as required by the Division to determine compliance with the particulate matter concentration emission limit.

4. Specific Monitoring Requirements:

a) Pursuant to 401 KAR 51:017 and 401 KAR 60:670, the permittee shall perform a qualitative visual observation of the opacity of emissions from each emission point on a weekly basis and maintain a log of the observations. If visible emissions from any emission point are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

5. Specific Recordkeeping Requirements:

a) Reporting and Recordkeeping shall be done in compliance with the requirements contained within 401 KAR 60:670, specifically 40 CFR 60.676.

b) The permittee shall maintain a log of the date, time and results of the monitoring required in Subsection 4 above.

c) Records of the lime processed (tonnage) shall be maintained.

d) See Section F, Conditions 5, 6, 7 and 8.

6. Specific Reporting Requirements:

Pursuant to 401 KAR 60:670, specifically 40 CFR 60.676, the owner and/or operator shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards of 40 CFR 60.672, including reports of opacity observations made using EPA Reference Method 9.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the filter and enclosures shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 40 CFR 60,Subpart OOO and in accordance with manufacturer’s specifications and/or standard operating practices.

b) Pursuant to 401 KAR 50:050, Section 1, records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 08  FGD Reagent Prep Handling (Fugitives)

Description:

- Machine Point 01 - LFD001  Barge Unload Bucket to Hopper
- Machine Point 02 - LFD002  Unload Hopper to Feeder
- Machine Point 03  Storage Pile
- Machine Point 04  Inactive Pile
- Machine Point 05 - LDC004A  Rail Unload
- Machine Point 06 - LDC004B  Rail Unload

Control Equipment:

- Partial Enclosures / Filters  Machine Points 05 - 06

Operating Rate:

- 400 tons/hour  Machine Points 01 - 02
- 0.72 acres  Machine Point 03
- 1.8 acres  Machine Point 04
- 200 tons/hour (each)  Machine Points 05 - 06

Construction Commenced Date: Estimated 2002

Applicable Regulations:

401 KAR 63:010, Fugitive Emissions
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the following:

1. Application and maintenance of asphalt, water, or suitable chemicals on roads, material stockpiles, and other surfaces which can create airborne dust; and

2. Installation and use of compaction or other measures to suppress the dust emissions during handling;
b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

c) Pursuant to 401 KAR 51:017, the permittee shall install control methods selected as BACT.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall monitor fugitive emissions weekly from each emission point. Enclosures demonstrate compliance with the requirements of 401 KAR 63:010 and Best Available Control Technology (BACT).

5. Specific Record Keeping Requirements:

a) The permittee shall maintain a log of the date, time, and results of the monitoring required in Subsection 4 above.

b) The permittee shall maintain the records of amount of limestone received and processed.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7 and 8.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the partial enclosures and filters shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010 and in accordance with manufacturer’s specifications and/or standard operating practices.

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 09 Fly Ash Handling System FADC001A and FADC001B

Description:

Fly Ash Silo Bins (2)  
Control Equipment: Filter  
Operating Rate: 75 tons/hour (each)  
Construction Commenced Date: Estimated Early 2002

Applicable Regulations:

401 KAR 59:010, New Process Operations  
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

Pursuant to 401 KAR 51:017, the permittee shall install control methods selected as BACT.

2. Emission Limitations:

   a) Pursuant to Regulations 401 KAR 59:010, the permittee shall not cause to be discharged into the atmosphere from any of the above mentioned emissions units gases which exhibit twenty (20) percent opacity or greater.

   b) Pursuant to State 401 KAR 59:010, particulate matter emissions from the bin filter shall not exceed \[3.59 \times (P)^{0.62}\] lbs/hr based on a three-hour average, where P is the flyash rate in tons/hr.

3. Testing Requirements:

   a) Pursuant to 401 KAR 59:010, the permittee shall determine the opacity of emissions from each stack by EPA Reference Method 9 annually, or more frequently if requested by the Division.

   b) Pursuant to 401 KAR 59:010, EPA Reference Method 5 shall be performed as required by the Division to determine compliance with the particulate matter concentration emission limit.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

The permittee shall perform a qualitative visual observation of the opacity of emissions from each stack on a weekly basis and maintain a log of the observations. If visible emissions from any stack are seen, then the permittee shall determine the opacity of emissions by Reference Method 9 and perform an inspection of the control equipment for any necessary repairs.

5. Specific Record Keeping Requirements:

a) The permittee shall maintain the records of amount of ash processed.

b) Pursuant to 401 KAR 59:005, Section 3(4), the permittee shall maintain the results of all compliance tests and calculations.

c) The permittee shall record each week the date, time and opacity of the visible emissions monitoring. In case of an exceedance, the permittee must record the reason (if known) and the measures taken to minimize or eliminate the exceedance.

6. Specific Reporting Requirements:

See Section F, Conditions 5, 6, 7 and 8.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the filter equipment shall be maintained and operated to ensure the emission unit is in compliance with applicable requirements of 401 KAR 59:010 and in accordance with manufacturer’s specifications and/or standard operating practices.

b) Pursuant to 401 KAR 59:005, Section 3(4), records regarding the maintenance of the control equipment shall be maintained.

c) See Section E for further requirements.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 10 and 11 Two Cooling Towers CT1 and CT2

Description:

Control Equipment: 0.002% Drift Eliminators
Operating Rate: 345,910 GPM each
Construction Commenced Date: Estimated 2002

Applicable Regulations:

401 KAR 63:010, Fugitive emissions
401 KAR 51:017, Prevention of significant deterioration of air quality applicable to major construction or modification commenced after September 22, 1982.

1. Operating Limitations:

   a) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

   b) Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive dust emissions beyond the property line is prohibited.

2. Emission Limitations:

   a) Pursuant to regulation 401 KAR 51:017, the cooling towers shall utilize 0.002% Drift Eliminators.

   b) Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne.

3. Testing Requirements:

   None

4. Specific Monitoring Requirements:

   The Permittee shall measure the total dissolved solids (TDS) content on at least a monthly basis. Measurement of TDS in the wastewater discharge permit associated with the units as required by a National Pollutant Discharge Elimination System (NPDES) permit, may be used to satisfy this requirement if the effluent has not been diluted or otherwise treated in a manner that would significantly reduce the TDS content.
SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:
   
a) The permittee shall maintain records of the manufacturer’s design of the Drift Eliminators.

b) The permittee shall maintain records of water circulation.

6. Specific Reporting Requirements:
   
See Section F, Conditions 5, 6, 7 and 8.

7. Specific Control Equipment Operating Conditions:

a) Pursuant to 401 KAR 50:055, Section 5, the drift eliminators shall be maintained and operated to ensure the emission units are in compliance with applicable requirements of 401 KAR 63:010 and in accordance with manufacturer’s specifications and/or standard operating practices.

b) See Section E for further requirements.
SECTION C – INSIGNIFICANT ACTIVITIES

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

<table>
<thead>
<tr>
<th>Description</th>
<th>Generally Applicable Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fire Water Pumps (2) Number two low sulfur (0.05% sulfur) fuel oil Fired (1) Electric</td>
<td>None</td>
</tr>
<tr>
<td>2. Maintenance Shop Activities</td>
<td>None</td>
</tr>
<tr>
<td>3. Number two low sulfur (0.05% sulfur) Fuel Oil Storage Tanks</td>
<td>401 KAR 59:050</td>
</tr>
<tr>
<td>4. Miscellaneous Water Storage Tanks</td>
<td>None</td>
</tr>
<tr>
<td>5. FGD Solid Waste By-product Handling and Long-term Storage</td>
<td>401 KAR 63:010</td>
</tr>
<tr>
<td>6. Number two low sulfur (0.05% sulfur) Diesel Fired Emergency Generator</td>
<td>None</td>
</tr>
<tr>
<td>7. Ammonia Tanks</td>
<td>401 KAR 68</td>
</tr>
<tr>
<td>8. Haul Roads</td>
<td>401 KAR 63:010</td>
</tr>
</tbody>
</table>
SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1) PM/PM$_{10}$(filterable and condensable), sulfur dioxide, carbon monoxide, nitrogen oxides, VOC and visible (opacity) emissions shall be measured by applicable reference methods, or equivalent or alternative methods approved by the cabinet (and U.S.EPA, if required), and shall not exceed the respective limitations specified herein..

2) Emissions Unit 01 and 02 shall be performance tested initially for compliance with the emission standards for PM/PM$_{10}$(filterable); sulfur dioxide (SO$_2$); nitrogen oxides (NO$_x$); and carbon monoxide (CO), by applicable reference methods, or by equivalent or alternative test methods approved by the cabinet and U.S. EPA.

3) Emissions Unit 01 and 02 shall be performance tested initially for compliance with the BACT emission standards for PM$_{10}$(condensable) and VOCs, by applicable reference method, or by method approved by the cabinet.

4) After the initial compliance test, and CEMS/COMs certification as stated above, continuing compliance with the emission standards shall be determined by continuous emission monitors for opacity, NO$_x$, CO and SO$_2$.

5) The permittee shall perform an optimization study to re-examine the 0.41 lb-SO$_2$/mmBtu 24-hour emission limit for emission units 1 and 2 after the initial compliance demonstration and two years of commercial operation of unit 1. The results of that study will be used to revise the 24-hour SO$_2$ limit with a target emission rate of 0.23 lb-SO$_2$/mmBtu using the following equation the new limit will be:

$$
E = 1.10 \times \left[ \sum_{i=1}^{n} \left( \frac{X_n}{n} \right) \right] + 1.96 \times \left[ \sqrt{n \sum_{i=1}^{n} X_n^2 - \left( \sum_{i=1}^{n} X_n \right)^2 \over n^2 (n-1)} \right]
$$

\[ n = \quad \text{Number of 24-hour data points} \]
\[ X_n = \quad \text{24-hour Average Reading for data point n} \]
\[ E = \quad \text{New 24-hour SO}_2\text{ Average Emission Limit} \]

NOTE: under no condition shall the short term limit set for 24-hour SO$_2$ be adjusted up above 0.41 lb-SO$_2$/mmBtu.
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, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. 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;
   [Material incorporated by reference by 401 KAR 52:020, Section 1b (IV)1].

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 years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Material incorporated by reference by 401 KAR 52:020, Sections 1b(IV) 2 and 1a(8)].

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. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
   d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.
   e. 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, other than continuous emission or opacity monitors, shall be submitted to the Division's Owensboro Regional Office 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 [Material incorporated by reference by 401 KAR 52:020, Section 1b (V )1].
SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due prior to January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of the 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 submit written notice 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 in front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6. Material incorporated by reference by 401 KAR 52:020, Section 1b V 3, 4.

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall 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, and
   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 postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:
SECTION F – MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

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 KEIS emission report is mailed to the permittee.

11. Pursuant to Section VII.3 of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.
SECTION G – GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including termination, revocation and reissuance, revision or denial of a permit [Material incorporated by reference by 401 KAR 52:020, Section 1a, 3].

2. 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 [Material incorporated by reference by 401 KAR 52:020, Section 1a, 6].

3. 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:
   a. If additional 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;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. 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;
   d. If any additional applicable requirements of the Acid Rain Program become applicable to the source.

   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.

4. The permittee shall furnish information upon request by the cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the permit [Material incorporated by reference by 401 KAR 52:020, Section 1a, 7,8].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [Material incorporated by reference by 401 KAR 52:020, Section 7(1)].
6. 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 [Material incorporated by reference by 401 KAR 52:020, Section 1a, 14].

7. 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 [Material incorporated by reference by 401 KAR 52:020, Section 1a, 4].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Material incorporated by reference by 401 KAR 52:020, Section 1a, 15(b)].

9. 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). [Material incorporated by reference by 401 KAR 52:020, Section 1a, 10]

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Material incorporated by reference by 401 KAR 52:020, Section 1a, 9].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. 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 a permit shall be considered compliance with:
   (a) Applicable requirements that are included and specifically identified in the permit and
   (b) Non-applicable requirements expressly identified in this permit.
SECTION G – GENERAL PROVISIONS (CONTINUED)

16. Pursuant to Section VII 2(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division’s Frankfort Central Office and the Division’s Technical Services Branch. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. 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 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].

2. 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)].

(c) Permit Revisions

1. 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 SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. 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.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements

1. Construction of process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
SECTION G – GENERAL PROVISIONS (CONTINUED)

2. Pursuant to 59:005, Section 3, within thirty (30) days following completion 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:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to Regulations 401 KAR 52:020, Section 3(2), and 401 KAR 51:017, Section 17(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.

4. 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.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration (test) on the affected facilities for particulate matter; sulfur dioxide (SO₂); nitrogen oxides (NOₓ); carbon monoxide (CO); fluoride as HF; beryllium; Hydrogen Chloride (HCl); Arsenic (As); Chromium (Cr); Manganese (Mg); Lead (Pb); Cadmium (Cd); and Mercury (Hg), in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)6 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. 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.

7. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the
required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

(e) **Acid Rain Program Requirements**

1. 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.

2. The source shall comply with all requirements and conditions of the Title IV, Acid Rain Permit contained in Section J of this document and the Phase II permit application (including the Phase II NOx compliance plan, if applicable) 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.

(f) **Emergency Provisions**

1. 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:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. 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  
   d. 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 within two working after the time when emission limitations were exceeded due to the emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source from other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. 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)].
SECTION G – GENERAL PROVISIONS (CONTINUED)

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR 68, Chemical Accident Prevention. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346

2. If requested, the permittee shall submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. 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:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   c. 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.
   d. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   e. 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.
   f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   g. 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.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
SECTION H – ALTERNATE OPERATING SCENARIO

None
SECTION I – COMPLIANCE SCHEDULE

None
SECTION J – ACID RAIN

TITLE IV PHASE II ACID RAIN

ACID RAIN PERMIT CONTENTS

1) Statement of Basis

2) SO₂ allowances allocated under this permit and NOx requirements for each affected unit.

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

4) The permit application submitted for this source. The owners and operators of the source must comply with the standard requirements and special provisions set forth in the Phase II Application.

5) Summary of Actions

- Statement of Basis:

Statutory and Regulatory Authorities: In accordance with KRS 224.10-100 and Titles IV and V of the Clean Air Act, the Kentucky Natural Resources and Environmental Protection Cabinet, Division for Air Quality issues this permit pursuant to Regulations 401 KAR 52:020, Permits, 401 KAR 52:060, Acid Rain Permit, and Federal 40 CFR Part 76.
SECTION J – ACID RAIN

PERMIT (Conditions)

<table>
<thead>
<tr>
<th>Plant Name: Thoroughbred Generating Station</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affected Unit: 01</td>
</tr>
</tbody>
</table>

• SO₂ Allowance Allocations and NOₓ Requirements for the affected unit:

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂ Allowances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tables 2, 3 or 4 of 40 CFR Part 73</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOₓ Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>NOₓ Limits</td>
<td>N/A**</td>
</tr>
</tbody>
</table>

* For newly constructed units, there are no SO₂ allowance per USEPA Acid Rain Program

** This unit currently does not have applicable NOₓ limits set by 40 CFR, part 76.
SECTION J – ACID RAIN

PERMIT (Conditions)

Plant Name: Thoroughbred Generating Station
Affected Unit: 02

- SO₂ Allowance Allocations and NOₓ Requirements for the affected unit:

<table>
<thead>
<tr>
<th>Year</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₂ Allowances</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
<tr>
<td>Tables 2, 3 or 4 of 40 CFR Part 73</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
<td>0*</td>
</tr>
</tbody>
</table>

NOₓ Requirements

<table>
<thead>
<tr>
<th>NOₓ Limits</th>
<th>N/A**</th>
</tr>
</thead>
</table>

* For newly constructed units, there are no SO₂ allowance per USEPA Acid Rain Program

** This unit currently does not have applicable NOₓ limits set by 40 CFR, part 76.
SECTION J – ACID RAIN

PERMIT (Conditions)

• Comments, Notes, and Justifications:

  The two (2) pulverized coal fired boilers, units 01 and 02 will be constructed after the SO₂ allocation date; therefore these units will have no SO₂ allowances allocated by U.S. EPA and must obtain offsets.

  The two (2) pulverized coal fired boilers, units 01 and 02 do not have applicable NOₓ limits set by 40 CFR part 76.

• Permit Application: Attached

  The Phase II Permit Application is a part of this permit and the source must comply with the standard requirements and special provisions set forth in the Phase II Application.

• Summary of Actions:

  Previous Action:

  Draft Permit has been advertised for public comment.

  Present Action:

  Final permit issued
PERMIT TO CONSTRUCT
AN ELECTRICAL POWER GENERATION FACILITY


<table>
<thead>
<tr>
<th>Name of Permittee:</th>
<th>Longview Power, LLC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Facility:</td>
<td>Longview Power</td>
</tr>
<tr>
<td>Permit No.:</td>
<td>R14-0024</td>
</tr>
<tr>
<td>Plant ID No.:</td>
<td>061-00134</td>
</tr>
<tr>
<td>Effective Date of Permit:</td>
<td>March 2, 2004</td>
</tr>
<tr>
<td>Permit Writer:</td>
<td>Edward Andrews</td>
</tr>
<tr>
<td>Facility Mailing Address:</td>
<td>1040 Great Plains Avenue Needham, MA 02492</td>
</tr>
<tr>
<td>County:</td>
<td>Monongalia</td>
</tr>
<tr>
<td>Nearest City or Town:</td>
<td>Maidsville - Cass District</td>
</tr>
<tr>
<td>UTM Coordinates:</td>
<td>Easting: 589.2 km Northing: 4,395.7 km Zone: 17</td>
</tr>
<tr>
<td>Directions to Exact Location:</td>
<td>From Morgantown, WV Route 19 west to Route 100 North to Route 53. Proceed 5.3 miles. Turn left onto Route 53/2. Access to facility is on the right.</td>
</tr>
<tr>
<td>Type of Facility or Modification:</td>
<td>Construction of 6,114 MMBtu/hr pulverized coal fired boiler, which is capable of generating 600 MW of electricity.</td>
</tr>
</tbody>
</table>

AS A RESULT OF GRANTING THIS PERMIT, THE SOURCE IS SUBJECT TO 45CSR30. THE TITLE V (45CSR30) APPLICATION WILL BE DUE WITHIN TWELVE (12) MONTHS AFTER THE DATE OF THE COMMENCEMENT OF THE OPERATION OR ACTIVITY (ACTIVITIES) AUTHORIZED BY THIS PERMIT, UNLESS GRANTED A DEFERRAL OR EXEMPTION BY THE SECRETARY FROM SUCH FILING DEADLINE PURSUANT TO A WRITTEN REQUEST FROM THE PERMITTEE.
IN ACCORDANCE WITH THE PERMIT APPLICATION AND ITS AMENDMENTS, THIS PERMIT IS LIMITED AS FOLLOWS:

A. SPECIFIC REQUIREMENTS

1. The following conditions and requirements are specific to the PC Boiler (ID #SB1):
   
   a. The hourly heat input of the PC Boiler shall not exceed 6,114 million British Thermal Units (MMBtu) per hour.
   
   b. The annual heat input of the PC Boiler shall not exceed 53,558,640 MMBtu per rolling 12-month total.

2. Emissions of nitrogen oxides (NOx) shall be controlled with the use of low NOx burners and selective catalytic reduction control technologies. NOx emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 489 lb/hr (0.08 lb/MMBtu) based on a 24-hour rolling average.
   
   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and 40 CFR 60.8.
   
   b. Continuous compliance with this emission limit shall be determined by Continuous Emission Monitors (CEMs) data. The permittee shall install, calibrate, operate and maintain CEMs, in accordance with the requirements of 40 CFR 60.13 and 40 CFR 75 for NOx from the PC Boiler.

3. Emissions of sulfur dioxides (SO2) shall be controlled with the use of a wet flue gas desulfurization control technology. SO2 emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 917 lb/hr (0.15lb/MMBtu) based on a three-hour rolling average.
   
   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and 40 CFR 60.8.
   
   b. Continuous compliance with this emission limit shall be performed by CEMs. The permittee shall install, calibrate, operate and maintain CEMs, in accordance with the requirements of 40 CFR 60.13 and 40 CFR 75 for SO2 from the PC Boiler.
4. Emissions of sulfur dioxides (SO$_2$) shall be controlled with the use of a wet flue gas desulfurization control technology. SO$_2$ emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 734 lb/hr (0.12 lb/MMBtu) based on a 24-hour rolling average.

   a. Continuous compliance with this emission limit shall be performed by CEMs. The permittee shall install, calibrate, operate and maintain CEMs, in accordance with the requirements of 40 CFR 60.13 and 40 CFR 75 for SO$_2$ from the PC Boiler.

   b. The permittee shall install CEMs to measure SO$_2$ emissions at the inlet and outlet of the WFGD control device (ID no. CB3) in accordance with 40 CFR 60.47a.

5. Emissions of particulate matter (PM) shall be controlled with fabric filter control technology. PM emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 110 lb/hr (0.018 lb/MMBtu) based on a six-hour rolling average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of \textit{Section B. Other Requirements} of this permit and 40 CFR 60.8.

   b. Continuous compliance with this emission limit shall be performed by CEMs. The permittee shall install, calibrate, operate and maintain CEMs in accordance with 40 CFR 60 and Performance Specification 11 (PS-11).

   c. The permittee shall demonstrate on-going compliance with this limit by conducting periodic testing every three years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of \textit{Section B. Other Requirements} of this permit and 40 CFR 60.8.

6. Emissions of particulate matter less than ten microns (PM-10) shall be controlled with fabric filter control technology. PM-10 (includes filterable and condensables other than water) emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 110 lb/hr (0.018 lb/MMBtu) based on a six-hour rolling average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of \textit{Section B. Other Requirements} of this permit and U.S.
EPA Test Methods 201 or 201A in conjunction with U.S. EPA Test Method 202 or another test method approved by the Director.

b. The permittee shall demonstrate compliance with this limit by conducting periodic testing every three years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Methods 201 or 201A in conjunction with U.S. EPA Test Method 202 or another test method approved by the Director.

c. All compliance demonstrations for this limit shall, at a minimum, consist of three - two hour test runs.

7. Emissions of carbon monoxide (CO) shall be controlled with the use of good combustion practices control technology. CO emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 673 lb/hr (0.11 lb/MMBtu) based on a three-hour rolling average.

a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 10B or another test method approved by the Director.

b. Continuous compliance with this emission limit shall be performed by CEMs. The permittee shall install, calibrate, operate and maintain CEMs, in accordance with the requirements of PS-4, PS-4A or PS-4B of Appendix B of 40 CFR 60 and the Quality Assurance Procedures of Appendix F of 40 CFR 60 for CO from the PC Boiler.

8. Emissions of volatile organic compounds (VOC) shall be controlled with the use of good combustion practices control technology. VOC emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 24.5 lb/hr (0.004 lb/MMBtu) based on a three-hour rolling average.

a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 18 or another test method approved by the Director.

b. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate
subsections of **Section B. Other Requirements** of this permit and U.S. EPA Test Method 18 or another test method approved by the Director.

9. Emissions of sulfuric acid mist (H$_2$SO$_4$) shall be controlled with the use of dry sorbent injection in conjunction with fabric filter control technology. H$_2$SO$_4$ emissions emitted to the atmosphere from the PC Boiler Stack (EP #EB1) shall not exceed 45.8 lb/hr (0.0075 lb/MBtu) based on a 3-hour rolling average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of **Section B. Other Requirements** of this permit and U.S. EPA Test Method 8 or another test method approved by the Director.

   b. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of **Section B. Other Requirements** of this permit and U.S. EPA Test Method 8 or another test method approved by the Director.

10. Emissions of Mercury (Hg) from the PC Boiler Stack shall not exceed 1.46x10$^{-2}$ lb/hr based on a three-hour average and 6.38x10$^{-2}$ TPY based on 12 month rolling average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of **Section B. Other Requirements** of this permit and U.S. EPA Test Method 29 or the draft ASTM Z65907, “Standard Method for Both Speciated and Elemental Mercury Determination” or another Test Method approved by the Director.

   b. The permittee shall demonstrate compliance with this emission limit by determining the Hg content of the coal consumed by the PC Boiler on a monthly basis. The permittee shall keep record of this analysis on site and utilize this content with the results of the most recent testing to determine the Hg emissions during the respective month for which the coal sample was taken.

   c. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of **Section B. Other Requirements** of this permit and U.S. EPA Test Method 29 or the draft ASTM Z65907, “Standard Method for Both Speciated and Elemental Mercury Determination” or another Test Method approved by the Director.
11. Emissions of Beryllium (Be) from the PC Boiler Stack shall not exceed $5.46 \times 10^{-3}$ lb/hr based on a three-hour average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 29 or another Test Method approved by the Director.

   b. The permittee shall demonstrate compliance with this emission limit by determining the Be content of the coal consumed by the PC Boiler on a monthly basis. The permittee shall keep record of this analysis on site and utilize this content with the results of the most recent testing to determine the Be emissions during the respective month for which the coal sample was taken.

   c. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 29 or another Test Method approved by the Director.

12. Emissions of Lead (Pb) from the PC Boiler Stack shall not exceed 0.109 lb/hr based on a three-hour average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 29 or another Test Method approved by the Director.

   b. The permittee shall demonstrate compliance with this emission limit by determining the Pb content of the coal consumed by the PC Boiler on a monthly basis. The permittee shall keep record of this analysis on site and utilize this content with the results of the most recent testing to determine the Pb emissions during the respective month for which the coal sample was taken.

   c. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 29 or another Test Method approved by the Director.
13. Emissions of hydrochloric acid (HCL) shall be controlled with the use of dry sorbent injection in conjunction with fabric filter control technology. Emissions of HCL from the PC Boiler Stack shall not exceed $2.14 \times 10^{-3}$ lb/hr ($1.00 \times 10^{-5}$ lb/MMBtu) based on a three-hour average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 26A or another test method approved by the Director.

   b. The permittee shall determine the chlorine content of the coal consumed by the PC Boiler on a monthly basis. The permittee shall keep record of this analysis on site and utilize this content with the results of the most recent testing to determine the HCL emissions during the respective month for which the coal sample was taken.

   c. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 26A or another Test Method approved by the Director.

14. Emissions of hydrofluoric acid (HF) shall be controlled with the use of dry sorbent injection in conjunction with fabric filter control technology. Emissions of HF from the PC Boiler Stack shall not exceed $2.14 \times 10^{-3}$ lb/hr ($1.00 \times 10^{-5}$ lb/MMBtu) based on a three-hour average.

   a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 26A or another test method approved by the Director.

   b. The permittee shall determine the fluoride content of the coal consumed by the PC Boiler on a monthly basis. The permittee shall keep record of this analysis on site and utilize this content with the results of the most recent testing to determine the HF emissions during the respective month for which the coal sample was taken.

   c. The permittee shall demonstrate compliance with this limit by conducting periodic testing every five years from the date of the initial compliance test. This testing shall be conducted in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 26A or another Test Method approved by the Director.
15. Visible emissions from the PC Boiler shall not exceed 10% opacity on a 6-minute averaging period.

   a. The permittee shall demonstrate compliance with this standard by complying with the applicable opacity monitoring requirements of 40 CFR 60.46b and 45SCR2 or another test method approved by the Director.

16. The stack height for the PC Boiler shall be constructed at a height of 554 feet above ground elevation.

17. For the purposes of mitigating acid deposition and visibility impacts into the Dolly Sods Wilderness Area, James River Face Wilderness Area, Otter Creek Wilderness Area, and Shenandoah National Park, the permittee shall obtain and permanently retire sulfur dioxide allowances in accordance with the following.

   a. The required number of sulfur dioxide allowances for the respective calendar year shall be determined by the actual sulfur dioxide emission, in tons, emitted from the PC boiler during each calendar year plus 10% and multiplied by the corresponding offset ratio as defined in paragraph b of this condition.

   b. Acceptable sulfur dioxide allowances under this condition shall be from facilities that were allocated sulfur dioxide allowances under 40 CFR 73 and that are located within one of the four quadrants as defined in the following table:

   c. The vintage year of the allowances shall correspond to the calendar year that is being mitigated.

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Northeast</th>
<th>Northwest</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offset Ratio</td>
<td>1:4</td>
<td>1:1</td>
<td>1:4</td>
<td>1:1</td>
</tr>
<tr>
<td>Longitude/Latitude</td>
<td>Longitude/Latitude</td>
<td>Longitude/Latitude</td>
<td>Longitude/Latitude</td>
<td></td>
</tr>
<tr>
<td>Northeast Corner</td>
<td>-77.528845/40.100689</td>
<td>-79.312228/40.119496</td>
<td>-77.73267/38.570665</td>
<td>-79.338651/38.603830</td>
</tr>
<tr>
<td>Northwest Corner</td>
<td>-79.312228/40.119496</td>
<td>-80.555022/40.151887</td>
<td>-79.338651/38.603830</td>
<td>-80.944637/38.628678</td>
</tr>
<tr>
<td>Southeast Corner</td>
<td>-77.73267/38.570665</td>
<td>-79.338651/38.603830</td>
<td>-77.671583/37.077938</td>
<td>-79393612/37.088164</td>
</tr>
<tr>
<td>Southwest Corner</td>
<td>-79.338651/38.603830</td>
<td>-80.944637/38.628678</td>
<td>-79393612/37.088164</td>
<td>-80.573361/37.123911</td>
</tr>
</tbody>
</table>
d. The permittee shall transfer these allowances into an account in the Allowance Tracking System administered by with U.S. EPA for the Acid Rain Program, to be identified by the Director. These retired allowances can never be used to meet any compliance requirement under the Clean Air Act or any State Implementation Plan.

e. The permittee shall submit a report to the Director no later than 60 days after the end of each calendar year, which shall contain the amount of sulfur dioxide emitted; the amount, facility, location of facility, vintage year of allowances retired, proof that allowances have been transferred into account identified by the Director and any applicable serial or other identification associated with the retired allowances.

f. At any time, but after at least 30 days notice to the Federal Land Managers the Director may approve an alternative mitigation plan in lieu of this condition. At a minimum, such a plan shall result in actual sulfur dioxide reductions from an existing stationary source(s) within one of the four quadrants as defined in b of this condition of at least 2,142 tons per year multiplied by the corresponding offset ratio. Such reductions must be practically enforceable.

18. The PC Boiler is subject to state rules 45 CSR 2, 45 CSR 26 and 45 CSR 33. The permittee shall comply with the applicable requirements from these rules (i.e. monitoring, testing, record keeping, and reporting requirements).

19. The PC Boiler is subject to 40 CFR 60 Subpart Da. The permittee shall comply with the applicable requirements from this regulation (i.e. monitoring, testing, record keeping, and reporting requirements).

20. The following conditions and requirements are specific to the Auxiliary Boiler (ID #SX1):

a. The hourly heat input of the Auxiliary Boiler shall not exceed 225 million British Thermal Units (MMBtu) per hour.

   i. The permittee shall monitor and record the amount of fuel consumed on a daily basis. Using the amount of fuel consumed, the appropriate Higher Heating Value (HHV) of the fuel and appropriate engineering calculations, the permittee shall determine the hourly heat input of the Auxiliary Boiler on a daily basis.

b. The permittee shall not operate the Auxiliary Boiler greater than 3,000 hours in a 12-month rolling period.
i. The permittee shall keep monthly records of hours the auxiliary boiler operated and a 12-month rolling total.

c. The Auxiliary Boiler shall not consume more than 675 million cubic feet of pipeline quality natural gas on an annual basis.

i. The permittee shall keep monthly records of amount of natural gas consume by the auxiliary boiler and a 12-month rolling total.

21. Emissions of nitrogen oxides (NO\textsubscript{x}) shall be controlled with the use of low NO\textsubscript{x} burners and good combustion practices control technologies. NO\textsubscript{x} emissions emitted to the atmosphere from the Auxiliary Boiler Stack (EP #EX1) shall not exceed 22.1 lb/hr (0.098 lb/MMBtu) based on a three-hour average.

a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and 40 CFR 60.8.

22. Emissions of SO\textsubscript{2} shall be controlled with the use of clean fuels (i.e. natural gas) control technology. SO\textsubscript{2} emissions emitted to the atmosphere from the Auxiliary Boiler Stack (EP #EX1) shall not exceed 0.004 lb/hr (1.8x10\textsuperscript{-5} lb/MMBtu) based on a three-hour average.

a. The auxiliary boiler shall not consume any natural gas with a sulfur content greater than 0.15 grains per 100 cubic of natural gas. The permittee shall keep annual records of the sulfur content of the natural gas consumed.

23. PM and PM-10 emissions emitted to the atmosphere from the Auxiliary Boiler Stack (EP #EX1) shall not exceed 0.50 lb/hr (2.22x10\textsuperscript{-3} lb/MMBtu) based on a six-hour average.

a. Initial compliance with this PM emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and 45CSR2.

24. CO emissions emitted to the atmosphere from the Auxiliary Boiler Stack (EP #EX1) shall not exceed 9 lb/hr (0.04 lb/MMBtu) based on a three-hour average.

a. Initial compliance with this emission limit shall be performed by the permittee through compliance testing in accordance with the appropriate subsections of Section B. Other Requirements of this permit and U.S. EPA Test Method 10B or another test method approved by the Director.
25. VOC emissions emitted to the atmosphere from the Auxiliary Boiler Stack (EP #EX1) shall not exceed 1.21 lb/hr (5.4x10^{-3} lb/MMBtu) based on a three-hour average.

26. Visible emissions from the PC Boiler shall not exceed 10% opacity on a 6-minute averaging period.

27. The Auxiliary Boiler is subject to state rules 45 CSR 2 and 45 CSR 10. The permittee shall comply with the applicable requirements from these rules (i.e. monitoring, testing, record keeping, and reporting requirements).

28. The Auxiliary Boiler is subject to 40 CFR 60 Subpart Db. The permittee shall comply with the applicable requirements from this regulation (i.e. monitoring, testing, record keeping, and reporting requirements).

29. The following conditions and requirements are specific to the internal combustion engines powering the emergency generator (ID #SG1) and fire pump (ID #SP1):

   a. The hours of operation for the engines of the emergency generator and fire pump shall be limited to 500 hours per rolling 12 month time period for each engine.

      i. The permittee shall keep monthly records of hours of operation and a 12-month rolling total.

   b. The sulfur content of the fuel used in the emergency generator and fire pump engines shall not exceed 0.05% sulfur by weight.

   c. The emergency generator engine (ID #SG1) shall not consume more than 14,750 gallons of fuel on an annual basis.

   d. The fire pump engine (ID #SP1) shall not consume more than 7,380 gallons of fuel on an annual basis.

   e. Emissions from the emergency generator and fire pump engines shall not exceed the following limits:

---

Table 1 - Emission Limits for the Emergency Generator and Fire Pump Engines

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Emergency Generator</th>
<th>Fire Pump</th>
</tr>
</thead>
</table>

---

R14-0024
Longview Power, L.L.C.
Maidsville, WV

Page 11 of 22
### Table 2 - Coal Transfer Limits

<table>
<thead>
<tr>
<th>ID</th>
<th>Transfer Point</th>
<th>Pollution Control Device</th>
<th>Maximum Coal Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tons/ Hour</td>
</tr>
<tr>
<td>C-1</td>
<td>Truck Dump to Hopper/Reclaim Feeder</td>
<td>Wind screens w/dust suppression</td>
<td>1,000</td>
</tr>
<tr>
<td>C-2</td>
<td>Reclaim Feeders to Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>1,000</td>
</tr>
</tbody>
</table>

30. The conditions and requirements in the following subdivisions are specific to the mechanical draft cooling tower (ID #ST-1):

   a. Emissions of PM and PM-10 shall be controlled with a 0.002% drift eliminator or an equivalent control technology. PM-10 emissions emitted to the atmosphere from the Cooling Tower (EP #ET1) shall not exceed 0.90 lb/hr and 3.9 TPY.

   i. For the purpose of determining compliance with this emission limit, the permittee shall monitor the concentration of total dissolved solids contained in the treated make-up water on a monthly basis. The permittee shall determine the PM-10 emissions using the current version of AP-42 for mechanical draft cooling towers.

31. The following conditions and requirements are specific to the coal handling operations:

   a. The coal transferred through the facility shall not exceed the maximum material throughputs as shown in Table 2 - “Coal Transfer Limits” of this permit.

   b. Pollution control mechanisms shall be installed and maintained on all material transfer points in accordance to Table 2 - “Coal Transfer Limits” of this permit.
<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>Pollution Control Device</th>
<th>Maximum Coal Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-3</td>
<td>Belt to Pile Feeder Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>1,000 2,365,200</td>
</tr>
<tr>
<td>C-4</td>
<td>Belt to Coal Pile</td>
<td>Dust Suppression</td>
<td>1,000 2,365,200</td>
</tr>
<tr>
<td>C-6</td>
<td>Coal Reclaim Feeder</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-7</td>
<td>Coal Reclaim Feeder</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-8</td>
<td>Reclalm Feeder to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-9</td>
<td>Reclalm Feeder to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-10</td>
<td>Belt Transfer to Surge Bin</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-11</td>
<td>Belt Transfer to Surge Bin</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-12</td>
<td>Belt Transfer to Surge Bin</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-15</td>
<td>Crusher Discharge to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-16</td>
<td>Crusher Discharge to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-17</td>
<td>Belt Transfer to Silo Feed Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-18</td>
<td>Belt Transfer to Silo Feed Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-19</td>
<td>Belt Transfer to Silo Feed Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-20</td>
<td>Belt Transfer to Silo Feed Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-22</td>
<td>Crusher Bypass to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
<tr>
<td>C-23</td>
<td>Crusher Bypass to Belt</td>
<td>Full Enclosure</td>
<td>600 2,365,200</td>
</tr>
</tbody>
</table>

c. Visible emissions from the coal crushers, conveying equipment and coal storage silos shall not exceed 20% opacity on a 6-minute averaging period.

i. The permittee shall conduct periodic compliance testing on a monthly basis in accordance with U.S. EPA Method 22 for the purpose of determining visible emissions from the coal crushers, conveying equipment and coal storage silos. Should the results of a periodic compliance test reveal that visible emissions are being emitted, the permittee has 24-hours from conducting Method 22 to conduct a Method 9 test to determine compliance with the emission limit in A.31.e of this permit.
d. The open stockpile SC-5 shall be limited to a maximum storage capacity of 120,000 tons of coal.

e. The two coal crushers (SC-14 & SC-15) shall not exceed the maximum processing rate of 600 tons per hour and 2,265,200 TPY for each crusher.

f. Emissions of PM and PM-10 from the coal crushers (SC-13 & SC-14) shall be controlled by a full enclosure with a dust suppression at the inlet of each surge bin for each respective crusher. PM emissions from each crusher shall not exceed 0.04 lb/hr and 0.09 TPY. PM-10 emissions from each crusher shall not exceed 0.02 lb/hr and 0.04 TPY.

g. The six (6) coal storage silos (ID #SC-21) shall be enclosed and vent to dust collector CC-21.

   i. Emissions of PM from dust collector CC-21 emitted to the atmosphere at emission point EC-21 shall not exceed 0.34 lb/hr and 1.35 TPY.

   ii. Emissions of PM-10 from dust collector CC-21 emitted to the atmosphere at emission point EC-21 shall not exceed 0.29 lb/hr and 1.15 TPY.

h. For the purposes of demonstrating compliance with the requirements in this subsection, the permittee shall monitor and record the daily amount of coal delivered to this facility.

i. The equipment and activities associated with the coal handling operation are subject to State rule 45 CSR 2. The permittee shall comply with the applicable requirements of this rule (i.e. monitoring, testing, record keeping, and reporting requirements).

j. The equipment associated with the coal handling operation is subject to 40 CFR 60 Subpart Y. The permittee shall comply with all applicable requirements from this regulation (i.e. monitoring, testing, record keeping, and reporting requirements).

32. The following conditions and requirements are specific to the limestone handling operations:

a. The material (limestone) transferred through the facility shall not exceed the maximum material throughputs as shown in Table 3 - “Limestone Handling Transfer Limits” on of this permit.
b. Pollution control mechanisms/measures shall be installed and maintained on all material transfer points in accordance with Table 3 - “Limestone Handling Transfer Limits” of this permit.

### Table 3 - Limestone Handling Transfer Limits

<table>
<thead>
<tr>
<th>ID</th>
<th>Description</th>
<th>Pollution Control Device</th>
<th>Maximum Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tons/Year</td>
</tr>
<tr>
<td>L-1</td>
<td>Truck Dump to Limestone Hopper Feeder</td>
<td>Partial Enclosure with dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-2</td>
<td>Feeder Transfer to Bucket Elevator</td>
<td>Full Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-3</td>
<td>Bucket Elevator Discharge to Pile Tripper Belt</td>
<td>Full Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-4</td>
<td>Belt Transfer to Limestone Pile</td>
<td>Partial Enclosure and Telescopic Chute</td>
<td>750,075</td>
</tr>
<tr>
<td>L-5</td>
<td>Reclaim Transfer to Reclaim Hopper/Belt</td>
<td>Partial Enclosure</td>
<td>750,075</td>
</tr>
<tr>
<td>L-7</td>
<td>Reclaim Belt to Reclaim Conveyor</td>
<td>Full Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-8</td>
<td>Reclaim Conveyor to Storage Conveyor</td>
<td>Partial Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-9</td>
<td>Bucket Elevator Discharge to Conveyor</td>
<td>Partial Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-10</td>
<td>Conveyor to Storage Conveyor</td>
<td>Partial Enclosure w/dust suppression</td>
<td>750,075</td>
</tr>
<tr>
<td>L-12</td>
<td>Silo Drop to Weigh Feeder</td>
<td>Full Enclosure</td>
<td>750,075</td>
</tr>
<tr>
<td>L-13</td>
<td>Ball Mill</td>
<td>Partial Enclosure</td>
<td>750,075</td>
</tr>
</tbody>
</table>

c. Stockpile L-5 shall be limited to a maximum storage capacity of 13,680 tons of limestone.

d. Stockpile L-5 shall be located in an A-frame enclosure with a roof and partial walls.

e. The limestone day silo (SL-11) shall be enclosed and vent to a dust collector (EL-11).

i. PM from limestone day silo vented to the atmosphere at emission point EL-11 shall not exceed 0.34 lb/hr based on a three-hour averaging period and 0.86 TPY.
ii. PM-10 from limestone day silo vented to the atmosphere at emission point EL-11 shall not exceed 0.29 lb/hr based on a three-hour averaging period and 0.73 TPY.

iii. Visible emissions from emission point EL-11 shall not exceed 7% opacity on a six-minute averaging period.

iv. The permittee shall conduct initial compliance testing in accordance with 40 CFR 60.08 for the purpose of demonstrating compliance with the emission limits in A.32.e.i and A.32.e.iii of this permit.

v. The permittee shall conduct periodic compliance testing on a monthly basis in accordance with U.S. EPA Method 22 for the purpose of determining visible emissions from emission point EL-11. Should the results of a periodic compliance test reveal that visible emissions are being emitted, the permittee has 24-hours from conducting Method 22 to conduct a Method 9 test to determine compliance with the emission limit in A.6.e.iii of this permit.

vi. The permittee shall maintain records of these compliance tests on site for a period of five (5) years.

f. The equipment associated with the limestone handling operation is subject to 40 CFR 60 Subpart OOO. The permittee shall comply with all applicable requirements from this regulation (i.e. monitoring, testing, record keeping, and reporting requirements).

33. The following conditions and requirements are specific to the ash handling operations:

   a. The permittee shall use a pressurized system to transfer all fly ash.

   b. The permittee shall install, operate, and maintain a bin exhaust filter to control PM emissions from the fly ash storage (CA-1).

   c. The bottom ash storage pile SA-7 shall be limited to a maximum storage capacity of 1,170 tons of bottom ash.

   d. The gypsum storage pile SG-1 shall be limited to a maximum storage capacity of 13,680 tons of gypsum.

34. Fugitive dust control measures as proposed in Permit Applications R14-0024 shall be installed, maintained, and operated in such a manner as to minimize
dust generation and atmospheric entrainment pursuant to Section 5 of 45 CSR

2. Such measures shall include, but not be limited to, the following:

a. Water spray systems for the purpose of fugitive particulate dust control shall be designed, installed, operated, and maintained so as to minimize the generation of fugitive particulate emissions from the wind erosion of stockpiles.

A properly designed, installed, and maintained winterization system on each of the water spray systems shall be in place so to functionally maintain all fugitive particulate dust control during periods when ambient temperature falls to or below 32 degrees Fahrenheit.

b. The permittee shall maintain a fixed water spray system and/or a water truck on site at the facility and in good operating condition, and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads and other work areas where mobile equipment is used.

The spray bar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the surface being treated.

The pump delivering the water, or solution shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure.

c. The permittee shall maintain and operated as need to minimize fugitive particulate matter from haul roads a street sweeper or other mobile equipment designed to remove debris (road dust) from paved plant roads. This activity shall be conducted daily to minimize fugitive particulate matter from paved plant roadways.

d. All belt conveyors shall be at a minimum partially enclosed.

35. The permittee shall construct and maintain an industrial fence around this permitted facility as defined in the March 3, 2003 submittal of the Air Quality Modeling Analysis Report. This industrial fence shall be constructed in such a manner to reasonably prevent the public from accessing this permitted facility.

36. All roadways at the permitted facility shall be paved, and maintained in such a way to minimize fugitive particulate matter emissions.
37. Notwithstanding the specific emission limits of Hazardous Air Pollutants (HAPs)
in this permit, the facility wide total emissions to the atmosphere of HAPs as
defined by Section 112(b) of the 1990 Clear Air Act Amendments shall be less
than 10 TPY of any single HAP and less than 25 TPY of combined total of HAPs
from the facility.

a. The permittee shall on a monthly basis determine and keep record of the
total amount of HAPs emitted from the facility during the past year on a
rolling 12-month total basis. Records of this determination shall be on a
speciated HAP basis and summing the total amount of HAP emitted during
the previous 12-months. All records used to determine the amount of
HAPs emitted must include but not be limited to sample calculations and
collected data (i.e. fuel consumption, hours operated).

B. OTHER REQUIREMENTS

1. In accordance with 45CSR30 - "Operating Permit Program", enclosed with this
permit is a Certified Emissions Statement (CES) Invoice, from the date of initial
startup through the following June 30. Said invoice and the appropriate fee shall
be submitted to this office no later than 30 days prior to the date of initial startup.
For any startup date other than July 1, the permittee shall pay a fee or prorated
fee in accordance with the Section 4.5 of 45CSR22. A copy of this schedule
may be found attached to the Certified Emissions Statement (CES) Invoice.

2. The permittee shall comply with all applicable provisions of 45CSR2, 45CSR10,
45CSR11, 45CSR14, 45CSR16, 45CSR26, 45CSR30, 45CSR33, 40 CFR 60 -
Subpart Da, 40 CFR 60 - Subpart Db, 40 CFR 60 - Subpart Y, and 40 CFR 60 -
Subpart OOO provided that the permittee shall comply with any more stringent
requirements as may be forth under SPECIFIC REQUIREMENTS, Section (A)
of this permit.

3. As for any testing required by this permit or the Director, the permittee shall
submit to the Director of the Division of Air Quality a test protocol detailing the
proposed test methods, the date, and the time the proposed testing is to take
place, as well as identifying the sampling locations and other relevant
information. The test protocol must be received by the Division no less than
thirty (30) days prior to the date the testing is to take place. Test results shall be
submitted to the Division no more than sixty (60) days after the date the testing
takes place.

4. Monitoring, Record keeping and Reporting sufficient to demonstrate compliance
with the specific emissions limits and operating parameters set forth in Section
A, Specific Requirements, of this permit shall be maintained on-site for at least five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. All requested records must be signed by a “Responsible Official” within 10 days of the request using the CERTIFICATION OF DATA ACCURACY statement (See Attachment A) which is to be attached to, or copied to the reverse side of each reporting form.

5. In complying with all applicable federal regulations, all notices and reports required to be submitted to the Administrator of the United States Environmental Protection Agency (“U.S. EPA”) shall be also submitted to the Director of the Division of Air Quality in accordance with the requirements of the applicable federal regulation.

6. All reports including testing protocols required under the terms and conditions of this permit shall be forwarded to:

Director And WV DEP - Division of Air Quality
WV DEP - Division of Air Quality NCRO
7012 MacCorkle Ave., SE 2031 Pleasant Vally Rd., Suite 1
Charleston, WV 25304-2943 Fairmont, WV 26554

7. The pertinent sections of 45CSR14 applicable to this facility include, but are not limited to, the following:

§45-14-7.1
Any person proposing to construct, or relocate a major stationary source or major modification shall meet each applicable emissions limitation promulgated by the Director and any applicable emissions standard or standard of performance under 40 CFR 60, 61, and 63.

§45-14-7.3
Any person proposing a major modification of a stationary source shall apply best available control technology for each regulated pollutant for which such proposed major modification would cause a significant net emissions increase from such source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.

§45-14-18.1.
A permittee may petition the Director for a transfer of a permit previously issued in accordance with this rule. The Director shall approve such permit transfer provided the following conditions are met:
§45-14-18.1(a)
The permittee, in the petition, describes the reasons for the requested permit transfer and certifies that the subject source is in compliance with all the provisions and requirements of its permit, and

§45-14-18.1(b)
The transferee acknowledges, in writing, that it accepts and will comply with all the requirements, terms, and conditions as contained in the subject permit.

§45-14-18.2.
The Director shall suspend or revoke a permit if, after eighteen (18) months from the date of issuance the holder of the permit cannot provide the Director, at the Director's request, with written proof of a good faith effort that such construction, modification, or relocation has commenced and remains ongoing. Such proof shall be provided not later than thirty (30) days after the Director's request.

§45-14-18.3.
The Director may suspend, modify, or revoke the permit if the plans and specifications upon which the approval was based or the conditions established in the permit are not adhered to.

C. GENERAL REQUIREMENTS

1. In accordance with 45CSR30 - "Operating Permit Program", the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first filing a Certified Emissions Statement (CES) and paying the appropriate fee. Such Certified Emissions Statement (CES) shall be filed and the appropriate fee paid annually. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

2. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

3. The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R14-0024 and any amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
4. At such reasonable time(s) as the Secretary may designate, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application and/or applicable regulations. Test(s) shall be conducted in such a manner as the Secretary may specify or approve and shall be filed in a manner acceptable to the Secretary. The Secretary, or his/her duly authorized representative, may at his option witness or conduct such test. Should the Secretary exercise his option to conduct such test(s), the permittee shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. For any tests to be conducted by the permittee, a test protocol shall be submitted to the DAQ by the permittee at least thirty (30) days prior to the test and shall be approved by the Secretary. The Secretary shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

5. In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations, either in whole or in part, authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

6. The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

7. The permittee shall notify the Secretary, in writing, within fifteen (15) calendar days of the commencement of the construction, modification, or relocation activities authorized under this permit.

8. The permittee shall notify the Secretary, in writing, at least fifteen (15) calendar days prior to actual startup of the operations authorized under this permit.

9. This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13.

10. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7.

11. At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous calendar year,
addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a submittal frequency other than on an annual basis.

ISSUED BY: ________________________________
JOHN A. BENEDICT, DIRECTOR
WV DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

DATE SIGNED: ___March 2, 2004________________________
ATTACHMENT A

CERTIFICATION OF DATA ACCURACY
CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that all information contained in the attached _______________, representing the period beginning __________________ and ending ________________, and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry.

Name (Type or Print): ____________________________________________________________

Signature¹: ____________________________________________________________________

Title: _________________________________________________________________________

Date: _________________________________________________________________________

Telephone No.: _________________________________________________________________

Fax No.: ______________________________________________________________________

¹ This form shall be signed by a "Responsible Official". "Responsible Official" means one of the following:

a. For a corporation: the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or (ii) the delegation of authority to such representative is approved in advance by the Director;

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.

R14-0024
Longview Power, L.L.C.
Maidsville, WV
Page A2 of A2
February 5, 2004

Santee Cooper (Cross Generating Station)
P.O. Box 2946101
Moncks Corner, SC 29461-2901

ATTENTION: Ken Dantzler

Dear Mr. Dantzler:

Your permit application has been reviewed by our technical staff. Enclosed is Construction Permit No. 0420-0030-CI. Please note the conditions on this permit by reading it carefully. In order to comply with Department Regulation 61-72, this construction permit is not effective until 15 calendar days after the date of issue listed on the permit.

In addition to this permit to construct, a permit to operate is required in accordance with the Air Pollution Control Regulations and Standards for the State of South Carolina. The regulations require a written request to obtain an operating permit be submitted to this Department no later than 15 days prior to placing the new, increased, or altered source in operation.

Please examine this new permit carefully for errors or omissions and notify the appropriate staff member, Joe Eller, at (803) 898-3831, or by e-mail at: ellerjc@dhec.sc.gov, promptly if any are discovered.

Sincerely,

Carl W. Richardson, P.E., Director
Engineering Services Division
Bureau of Air Quality

CWR:JCE:pe

Enclosure

cc: Trident District EQC Office
    Permit File: 0420-0030
    Main File: 0420-0030
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
BUREAU OF AIR QUALITY
PSD, NSPS, CASE-BY-CASE MACT, SYNTHETIC MINOR CONSTRUCTION PERMIT

Santee Cooper (Cross Generating Station)
553 Cross Station Road
Pineville, SC 29436

Permission is hereby granted to install two (2) coal-fired boilers, also firing up to 30% petcoke by weight on either boiler. Each boiler (#03 and #04) will supply steam to a single steam turbine/generator set. The new boilers are each rated at 5,400 million BTU/hr (normal pressure rating), 5,700 million BTU/hr (overpressure rating) with an output of 660 MW each. These boilers will be equipped with Low NOX burners (LNBs), Selective Catalytic Reduction systems (SCRs), Flue Gas Desulfurization (FGDs) (wet limestone scrubbers), and Electrostatic Precipitators (ESPs) for control of NOX, SO2, and PM/PM10 emissions, respectively. These boilers will be subject to 40CFR60, Subparts A and D; Section 112(g), Case-By-Case-MACT; and Acid Rain requirements. A coal handling system consisting of coal bunkers (6 bunkers in each of the two sets) for the two boilers and coal conveyors to each bunker set will be installed. This coal handling system will be subject to 40CFR60, Subparts A and Y. An ash handling system for each boiler will also be installed. Two emergency generators rated at 1,500 kW each fired on No. 2 fuel oil with 0.05% sulfur or less will be provided for backup power. A 380 HP fire pump will be provided for fire protection. Storage tanks will also be constructed for storage of fuels and ammonia. Six (6) 30,000 gallon anhydrous ammonia storage tanks will be subject to Section 112(r), Risk Management Program. A limestone handling system will also be installed consisting of a reclaim hopper, conveyors, storage pile, and truck unloading. The reclaim hopper, platform conveyor, (2) ball mills, conveyor to transfer tower, and (2) conveyors to silo will be subject to 40CFR60, Subparts A and OOO. A gypsum handling system will also be installed consisting of conveyors to drops, storage piles, and truck loading. The gypsum conveyors will be subject to 40CFR60, Subparts A and OOO. These processes will all be subject to SC Regulation 62.5, Standard No. 7 – “Prevention of Significant Deterioration” (PSD), as well as other state regulations described in the Special Conditions section of this permit. In addition, because SO2, NOX, and H2SO4 pollutants are netting out of SC Regulation 62.5, Standard No. 7, these pollutants are subject to SC Regulation 62.1, Section II(H) – “Synthetic Minor Plant Permits.”

NOTWITHSTANDING ANY OF THE CONDITIONS LISTED BELOW, NO APPLICABLE LAW, REGULATION, OR STANDARD MAY BE VIOLATED.

CONDITIONS

1. All official correspondence, plans, permit application forms, and written statements are an integral part of this permit.

2. THE DIRECTOR OF THE ENGINEERING SERVICES DIVISION MUST BE NOTIFIED IN WRITING OF THE DATE CONSTRUCTION BEGAN POSTMARKED NO LATER THAN 30 DAYS AFTER SUCH DATE, AND THE ACTUAL DATE OF STARTUP POSTMARKED WITHIN 15 DAYS AFTER SUCH DATE OF EACH PERMITTED FACILITY.

PERMIT NUMBER: 0420-0030-C1
PLANT LOCATION: 553 Cross Station Road - Pineville
DATE OF ISSUE: February 5, 2004
FACILITY SIC CODE: 4911

3. This construction permit shall expire eighteen months from date issued. This permit may be extended one year upon approval by the Bureau following the written request from the permittee. This request must be made prior to the permit expiration.

4. An expired construction permit may be reactivated within one year of the expiration only upon approval by the Bureau following the written request of the permittee. This request shall address all laws, regulations, and standards applicable at the time of request for reactivation.

This is pursuant to the provisions of Section 48-1-110, 1976 Codes of South Carolina, as amended, and the South Carolina Air Quality Control Regulation 61-62.1, Section II and the Code of Federal Regulations, Title 40, Part 60, Subpart A.

I. STANDARD CONDITIONS

A. This permit expressly incorporates all the provisions of South Carolina Department of Health and Environmental Control Regulation 61-62.1, Section II, Paragraph C and the Code of Federal Regulations, Title 40, Part 60, Subpart A.

II. SPECIAL CONDITIONS

A. EMISSION LIMITATIONS

Air pollutant emissions shall not exceed the following:

<table>
<thead>
<tr>
<th>ID</th>
<th>Pollutant/Standard</th>
<th>Limit</th>
<th>Reference Method</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers 03 and 04</td>
<td>Opacity</td>
<td>20%</td>
<td>9</td>
<td>SC Regulation 61-62.5, Std. No. 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>40 CFR 60, Subpart Da</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>PM</td>
<td>0.03 lb/million BTU</td>
<td>5, 5B or 17</td>
<td>40 CFR 60, Subpart Da</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>PM</td>
<td>0.015 lb/million BTU</td>
<td>5, 5B or 17</td>
<td>SC Regulation 61-62.5, Std. No. 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>PM&lt;sub&gt;10&lt;/sub&gt;</td>
<td>0.018 lb/million BTU</td>
<td>201, 202</td>
<td>SC Regulation 61-62.5, Std. No. 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>CO</td>
<td>0.16 lb/million BTU</td>
<td>10</td>
<td>SC Regulation 61-62.5, Std. No. 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>VOC</td>
<td>0.0024 lb/million BTU</td>
<td>18, 25 or 25A</td>
<td>SC Regulation 61-62.5, Std. No. 5.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SC Regulation 61-62.5, Std. No. 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.6 lb/million BTU and 70% removal efficiency (30-day rolling avg.)</td>
<td>6 or 6C</td>
<td>40 CFR 60, Subpart Da</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>0.13 lb/million BTU (365-day rolling avg.)</td>
<td>6 or 6C</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>95% removal efficiency (365-day rolling avg.)</td>
<td>6 or 6C</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO&lt;sub&gt;2&lt;/sub&gt;</td>
<td>3,250 tpy, each (365-day rolling sum)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>H&lt;sub&gt;2&lt;/sub&gt;SO&lt;sub&gt;4&lt;/sub&gt;</td>
<td>0.0014 lb/million BTU (365-day rolling avg.)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>ID</td>
<td>Pollutant/Standard</td>
<td>Limit</td>
<td>Reference Method</td>
<td>Regulation</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>NOX</td>
<td>1.6 lb/megawatt-hr (0.185 lb/million BTU) (30-day rolling avg.)</td>
<td>7 or 7E</td>
<td>40 CFR 60, Subpart Da</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>NOX</td>
<td>0.08 lb/million BTU (365-day rolling avg.)</td>
<td>7 or 7E</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>NOX</td>
<td>2,278 tpy, each (365-day rolling sum)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Lead</td>
<td>1.69 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.5, Std. No. 7</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Mercury</td>
<td>3.6 E-06 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.5, Std. No. 7 SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>HCl</td>
<td>2.4 E-03 lb/million BTU, each</td>
<td>26</td>
<td>SC Regulation 61-62.5, Std. No. 7 SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>HF</td>
<td>3.0 E-04 lb/million BTU, each</td>
<td>13</td>
<td>SC Regulation 61-62.5, Std. No. 7 SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Beryllium</td>
<td>8.44 E-07 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.5, Std. No. 7 SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Antimony</td>
<td>7.0 E-07 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Arsenic</td>
<td>1.6 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Cadmium</td>
<td>2.1 E-06 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Chromium</td>
<td>1.4 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Cobalt</td>
<td>4.0 E-06 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Manganese</td>
<td>2.0 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Nickel</td>
<td>1.1 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Selenium</td>
<td>5.2 E-05 lb/million BTU, each</td>
<td>29</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO2, NOX</td>
<td>See Acid Rain Permit</td>
<td>N/A</td>
<td>40 CFR 72, 73, 75, and 76</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO2</td>
<td>5,295 tpy (365-day rolling sum) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO2</td>
<td>3,350 tpy (365-day rolling sum) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO2</td>
<td>0.23 lb/million BTU (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO2</td>
<td>0.15 lb/million BTU (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>ID</td>
<td>Pollutant/Standard</td>
<td>Limit</td>
<td>Reference Method</td>
<td>Regulation</td>
</tr>
<tr>
<td>------</td>
<td>--------------------</td>
<td>--------------------------------------</td>
<td>------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO₂</td>
<td>86% removal efficiency (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>SO₂</td>
<td>91% removal efficiency (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>H₂SO₄</td>
<td>0.0025 lb/million BTU (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>H₂SO₄</td>
<td>0.0016 lb/million BTU (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>NOₓ</td>
<td>6,116 tpy (365-day rolling sum) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>NOₓ</td>
<td>5,000 tpy (365-day rolling sum) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>NOₓ</td>
<td>0.27 lb/million BTU (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 01</td>
<td>NOₓ</td>
<td>0.22 lb/million BTU (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>SO₂</td>
<td>7,277 tpy (365-day rolling sum) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>SO₂</td>
<td>5,973 tpy (365-day rolling sum) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>NOₓ</td>
<td>0.32 lb/million BTU (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>NOₓ</td>
<td>0.26 lb/million BTU (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>SO₂</td>
<td>75% removal efficiency (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>SO₂</td>
<td>86% removal efficiency (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>H₂SO₄</td>
<td>0.0034 lb/million BTU (365-day rolling avg.) (See Note 1)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02</td>
<td>H₂SO₄</td>
<td>0.0028 lb/million BTU (365-day rolling avg.) (See Note 2)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>ID</td>
<td>Pollutant/Standard</td>
<td>Limit</td>
<td>Reference Method</td>
<td>Regulation</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>----------------------------</td>
<td>------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>Boiler 02 NOX</td>
<td></td>
<td>6,662 tpy (365-day rolling sum)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02 NOX</td>
<td></td>
<td>5,500 tpy (365-day rolling sum)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02 NOX</td>
<td></td>
<td>0.29 lb/million BTU (365-day rolling avg.)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boiler 02 NOX</td>
<td></td>
<td>0.24 lb/million BTU (365-day rolling avg.)</td>
<td>N/A</td>
<td>SC Regulation 61-62.5, Std. No. 7 avoidance</td>
</tr>
<tr>
<td>Boilers 03 and 04 PM</td>
<td>0.015 lb/million BTU (30-day rolling avg.)</td>
<td>5, 5B or 17</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04 SO2</td>
<td>0.25 lb/million BTU (30-day rolling avg.)</td>
<td>6 or 6C</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04 SO2</td>
<td>95% removal efficiency (30-day rolling avg.)</td>
<td>N/A</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04 NOX</td>
<td>0.08 lb/million BTU (30-day rolling avg.)</td>
<td>7 or 7E</td>
<td>SC Regulation 61-62.63 (Case-By-Case-MACT)</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 01-04 combined SO2</td>
<td>8.25 tons/3 hours (3-hour rolling sum)</td>
<td>N/A</td>
<td>to meet 3 hr AAS</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 01-04 combined SO2</td>
<td>60 tons/day (24-hour rolling sum)</td>
<td>N/A</td>
<td>to meet 24 hr AAS</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 01-04 SO2</td>
<td>0.38 lb/million BTU (24-hour rolling avg.) (See Condition 45)</td>
<td>6 or 6C</td>
<td>to meet 24 hr AAS</td>
<td>No</td>
</tr>
<tr>
<td>Boilers 03 and 04 SO2</td>
<td>0.44 lb/million BTU (24-hour rolling avg.) (See Condition 44)</td>
<td>6 or 6C</td>
<td>to meet 24 hr AAS</td>
<td>No</td>
</tr>
<tr>
<td>COAL HANDLING: P19a-f</td>
<td>Opacity</td>
<td>20%</td>
<td>9</td>
<td>40 CFR 60, Subpart Y SC Regulation 61-62.5, Std. No. 4</td>
</tr>
<tr>
<td></td>
<td>FLY ASH HANDLING: Fly Ash Silo #3</td>
<td>Opacity</td>
<td>20%</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>LIMESTONE HANDLING: P36 P36a P36c P36d P36e P36f P36g P36h</td>
<td>Opacity</td>
<td>7% from conveyor transfer points 7% if controlled by baghouse 20%</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>LIMESTONE HANDLING: F36 F36a F36b P36b</td>
<td>Opacity</td>
<td>10% from fugitive sources 20%</td>
<td>9</td>
</tr>
<tr>
<td>ID</td>
<td>Pollutant/ Standard</td>
<td>Limit</td>
<td>Reference Method</td>
<td>Regulation</td>
</tr>
<tr>
<td>----</td>
<td>---------------------</td>
<td>------</td>
<td>------------------</td>
<td>------------</td>
</tr>
<tr>
<td></td>
<td>GYPSUM HANDLING:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35a</td>
<td>Opacity</td>
<td>10% from fugitive sources 20%</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>F35b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COOLING TOWER:</td>
<td>Opacity</td>
<td>20%</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>CT3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CT4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COAL HANDLING:</td>
<td>PM</td>
<td>1.4 lb/hr 1.4 lb/hr</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>P19a-f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P20a-f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FLY ASH HANDLING:</td>
<td>PM</td>
<td>0.002 lb/hr 0.002 lb/hr</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Fly Ash Silo #3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fly Ash Silo #4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LIMESTONE HANDLING:</td>
<td>PM</td>
<td>0.0002 lb/hr 0.0002 lb/hr 0.02 lb/hr 0.0002 lb/hr 0.0002 lb/hr 0.0002 lb/hr 0.0002 lb/hr 0.0002 lb/hr</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>P36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36g</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>P36h</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LIMESTONE HANDLING:</td>
<td>PM</td>
<td>0.02 lb/hr 0.29 lb/hr 0.02 lb/hr 0.02 lb/hr</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>F36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F36a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F36b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F36c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GYPSUM HANDLING:</td>
<td>PM</td>
<td>0.018 lb/hr 0.018 lb/hr 0.037 lb/hr 0.29 lb/hr 0.29 lb/hr 2.3 lb/hr</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>F35a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35e</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35d</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F35f</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COOLING TOWER:</td>
<td>PM</td>
<td>1.86 lb/hr (each tower)</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>CT3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CT4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Pollutant/Standard</td>
<td>Limit</td>
<td>Reference Method</td>
<td>Regulation</td>
</tr>
<tr>
<td>----</td>
<td>--------------------</td>
<td>-------</td>
<td>------------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| LIMESTONE HANDLING:  
P36  
P36a  
P36c  
P36d  
P36e  
P36f  
P36g  
P36h | 0.02 grains/dscf (point sources) | 5 | 40 CFR 60, Subpart OOO | No |
| COAL HANDLING:  
P19a-f  
P20a-f | 83.0 lb/hr (each bunker system) | 5 | SC Regulation 61-62.5, Std. No. 4 | No |
| FLY ASH HANDLING:  
Fly Ash Silo #3  
Fly Ash Silo #4 | 43.4 lb/hr (each silo system) | 5 | SC Regulation 61-62.5, Std. No. 4 | No |
| LIMESTONE HANDLING:  
F36  
F36a  
F36b  
P36  
P36a  
P36b  
P36c  
P36d  
P36e  
P36f  
P36g  
P36h | 38.8 lb/hr, total  
(N/A for F36, F36a, F36b, P36b) | 5 | SC Regulation 61-62.5, Std. No. 4 | No |
| GYPSUM HANDLING:  
F35a  
F35b  
F35c  
F35e  
F35d  
F35f | 56.5 lb/hr, total  
N/A | N/A | SC Regulation 61-62.5, Std. No. 4 | No |
| COOLING TOWER:  
CT3  
CT4 | 83.8 lb/hr (each tower)  
N/A | N/A | SC Regulation 61-62.5, Std. No. 4 | No |

N/A = Not Applicable  
If not listed in the above table, the averaging period is as specified in the associated reference test method.  
Note 1 - Applicable upon start of operation of Boiler 03 or Boiler 04, whichever comes first  
Note 2 - Applicable upon start of operation of both Boiler 03 and Boiler 04  

The above emission limitations are based on operation at rated capacity. Operation at other than rated capacity must meet emission limits specified in the applicable regulations based on that operating rate. All test methods must be the most recent revisions that are published
in the *Code of Federal Regulations* (40CFR60 Appendix A) as in effect on the date of this permit issuance.

## B. CONTINUOUS MONITORING REQUIREMENTS

<table>
<thead>
<tr>
<th>ID</th>
<th>Pollutant</th>
<th>Averaging Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers 03 and 04</td>
<td>Opacity</td>
<td>6 minute block average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>SO₂</td>
<td>3-hour rolling average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td></td>
<td>24-hour rolling average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td></td>
<td>30-day rolling average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td></td>
<td>365-day rolling average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>NOₓ</td>
<td>30-day rolling average</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td></td>
<td>365-day rolling average</td>
</tr>
<tr>
<td>Boilers 01 and 02</td>
<td>SO₂ and NOₓ</td>
<td>365-day rolling average</td>
</tr>
</tbody>
</table>

## C. SOURCE TEST SCHEDULE

<table>
<thead>
<tr>
<th>ID</th>
<th>Pollutant</th>
<th>Frequency</th>
<th>Method</th>
<th>Averaging Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers 03 and 04</td>
<td>Opacity</td>
<td>Initial, Annual (See Note 1)</td>
<td>9</td>
<td>6 minutes</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>PM</td>
<td>Initial, Annual (See Note 1)</td>
<td>5, 5B or 17</td>
<td>(3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>PM₁₀</td>
<td>Initial</td>
<td>201 and 202</td>
<td>(3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>CO</td>
<td>Initial, Annual</td>
<td>10</td>
<td>(3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>VOC</td>
<td>Initial</td>
<td>18, 25 or 25A</td>
<td>(3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>H₂SO₄</td>
<td>Initial</td>
<td>8</td>
<td>(3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Lead</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>HCl</td>
<td>Initial</td>
<td>26</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>HF</td>
<td>Initial</td>
<td>13</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Beryllium</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Mercury</td>
<td>Initial, Annual (See Note 2)</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Antimony</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Arsenic</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Cadmium</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Chromium</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Cobalt</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Manganese</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Nickel</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
<tr>
<td>Boilers 03 and 04</td>
<td>Selenium</td>
<td>Initial</td>
<td>29</td>
<td>minimum of (3) one hour runs</td>
</tr>
</tbody>
</table>
### Table: Pollutant Emissions

<table>
<thead>
<tr>
<th>ID</th>
<th>Pollutant</th>
<th>Frequency</th>
<th>Method</th>
<th>Averaging Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boilers 01 and 02</td>
<td>H₂SO₄</td>
<td>Initial (after startup of each new boiler)</td>
<td>8</td>
<td>(3) one hour runs</td>
</tr>
</tbody>
</table>

Note 1: Testing frequency may be more frequent than annual depending on test results.
Note 2: Annual testing may be rescinded if facility agrees to comply with the MACT for HAP emissions from utility coal-fired power plants.

### D. ADDITIONAL CONDITIONS

1. **(Facility wide)** The permittee shall pay fees in accordance with SC Regulation 61-30, SC Environmental Protection Fees.

2. **(Facility wide)** In accordance with SC Regulation 61-62.1 Section II(C)(3), for all sources not required to have continuous emissions monitors, in the event of any malfunction of air pollution control equipment or system, process upset or other equipment failure which results in discharges of air contaminants lasting for one hour or more and which are greater than those discharges described for normal operation in the permit application shall be reported to the local Environmental Quality Control (EQC) District office within twenty-four (24) hours after the beginning of the occurrence. The permittee shall also submit a written report within thirty (30) days of the occurrence. The report shall contain as a minimum, the following:  
   - the identity of the emission unit and associated equipment where excess emissions occurred,  
   - the magnitude of excess emissions,  
   - the time and duration of excess emissions,  
   - the steps taken to remedy the malfunction and to prevent a recurrence,  
   - documentation that control equipment and processes were at all times maintained and operated, to the maximum extent practicable, in a manner that was consistent with good practice for minimizing emissions.  
   Such a report shall in no way serve to excuse, otherwise justify, or in any manner affect any potential liability or enforcement action resulting from the occurrence.

3. **(Facility wide)** Air dispersion modeling (or other method) has demonstrated that this facility’s operation will not interfere with the attainment and maintenance of any state or federal standard. Any changes in the parameters used in the air dispersion modeling may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are listed in Attachment A of this permit. Higher emission rates may be administratively incorporated into Attachment A of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.

The owner/operator shall maintain this facility in compliance with the pollutant limitations in Section II(A) - Emissions Limitations, and/or as listed in Attachment A of this construction permit, whichever is more restrictive. This is a State Only enforceable requirement. Should the facility wish to increase the emission rates listed in Attachment A, it may do so by the administrative process specified in this permit condition.
4. **(CI)** These conditions shall not supersede any State or Federal requirements such as National Emission Standards for Hazardous Air Pollutants, unless these conditions would impose a more restrictive limit.

5. **(CI)** This construction permit was reviewed and issued based on the permit application submitted by the owner/operator. The owner/operator shall obtain any Bureau authorization required under South Carolina Regulation 61-62.1, Section II(A)(1) prior to making modifications not covered under this construction permit.

6. **(CI)** The owner/operator of this facility must submit a written request to obtain an operating permit to the Director of Engineering Services Division at least fifteen (15) days prior to placing this source into operation. The facility shall also meet the requirements as specified in SC Regulation 61-62.70.7(e).

7. **(CI)** These sources are subject to all provisions of SC Regulation 61-62.5, Standard No. 7, “Prevention of Significant Deterioration” for PM, PM10, CO, VOC, lead, beryllium, mercury, and fluorides.

8. **(CI)** The Best Available Control Technology (BACT) for Boilers 03 and 04 was determined to be the following:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>BACT</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>Use of electrostatic precipitator</td>
<td>0.015 lb/million BTU</td>
</tr>
<tr>
<td>PM10</td>
<td>Use of electrostatic precipitator</td>
<td>0.018 lb/million BTU</td>
</tr>
<tr>
<td>CO</td>
<td>Good combustion practices</td>
<td>0.16 lb/million BTU</td>
</tr>
<tr>
<td>VOC</td>
<td>Good combustion practices</td>
<td>0.00241 lb/million BTU</td>
</tr>
<tr>
<td>Lead</td>
<td>Use of electrostatic precipitator</td>
<td>0.0000169 lb/million BTU</td>
</tr>
<tr>
<td>Beryllium</td>
<td>Use of electrostatic precipitator</td>
<td>0.000000844 lb/million BTU</td>
</tr>
<tr>
<td>Mercury</td>
<td>Use of electrostatic precipitator</td>
<td>0.015 lb/million BTU (PM)</td>
</tr>
<tr>
<td></td>
<td>Use of FGD Scrubber</td>
<td>0.25 lb/million BTU (SO₂)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>95% scrubbing efficiency</td>
</tr>
<tr>
<td></td>
<td>Use of LNB and SCR</td>
<td>0.08 lb/million BTU (NO₃)</td>
</tr>
<tr>
<td>HF</td>
<td>Use of FGD Scrubber</td>
<td>0.25 lb/million BTU (SO₂)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>95% scrubbing efficiency</td>
</tr>
</tbody>
</table>
(CI) The Case-by-Case MACT (112(g)) Determination for Boilers 03 and 04 was determined to be the following:

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>BACT</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>Use of electrostatic precipitator</td>
<td>0.015 lb/million BTU (PM)</td>
</tr>
<tr>
<td></td>
<td>Use of FGD Scrubber</td>
<td>0.25 lb/million BTU (SO₂)</td>
</tr>
<tr>
<td></td>
<td>Use of LNB and SCR</td>
<td>95% scrubbing efficiency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.08 lb/million BTU (NOₓ)</td>
</tr>
<tr>
<td>Lead</td>
<td>Use of electrostatic precipitator</td>
<td>0.0000169 lb/million BTU</td>
</tr>
<tr>
<td>Beryllium</td>
<td>Use of electrostatic precipitator</td>
<td>0.000000844 lb/million BTU</td>
</tr>
<tr>
<td>Antimony</td>
<td>Use of electrostatic precipitator</td>
<td>7.0 E-07 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Arsenic</td>
<td>Use of electrostatic precipitator</td>
<td>1.6 E-05 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Cadmium</td>
<td>Use of electrostatic precipitator</td>
<td>2.1 E-06 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Chromium</td>
<td>Use of electrostatic precipitator</td>
<td>1.4 E-05 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Cobalt</td>
<td>Use of electrostatic precipitator</td>
<td>4.0 E-06 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Manganese</td>
<td>Use of electrostatic precipitator</td>
<td>2.0 E-05 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Nickel</td>
<td>Use of electrostatic precipitator</td>
<td>1.1 E-05 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>Selenium</td>
<td>Use of electrostatic precipitator</td>
<td>5.2 E-05 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PM – 0.015 lb/million BTU</td>
</tr>
<tr>
<td>HCl</td>
<td>Use of FGD Scrubber</td>
<td>2.4 E-03 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SO₂ – 0.25 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber efficiency – 95%</td>
</tr>
<tr>
<td>HF</td>
<td>Use of FGD Scrubber</td>
<td>3.0 E-04 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SO₂ – 0.25 lb/million BTU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scrubber efficiency – 95%</td>
</tr>
</tbody>
</table>

(Boilers 03 and 04) These units are permitted to burn only coal, including synfuel, and petcoke blended up to 30% by weight as fuel. Fuel oil No. 2 containing 0.5% or less sulfur may be used for initial firing of each boiler startup. The use of any other substances as fuel is prohibited without prior written approval from the Bureau of Air Quality. During operation of these units (unless operationally prohibited during startup and shutdown), all control devices shall be on line and operating properly to include ESPs, Scrubbers, Low NOₓ Burners, and SCR controls.

For this permit, the term “coal” and requirements pertaining to coal shall also include the following synthetic fuel-altered coal (synfuel):
- coal with HES binder (petroleum emulsion - MSDS identification AMI-403)
- coal with NALCO 9838 binder (water based vinyl polymer)
- coal with Dow Latex DL 298NA (latex based emulsion in water)

(Boilers 03 and 04) These units are subject to all requirements of 40 CFR 60 Subparts A and Da, New Source Performance Standards for Electric Utility Steam Generating Plants.
<table>
<thead>
<tr>
<th>Condition Number</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12.</strong></td>
<td><em>(Boilers 03 and 04)</em> The owner/operator shall maintain daily monitoring of the petcoke blend ratio. This blend shall not exceed 30% by weight blend petcoke. The petcoke blend ratio shall be calculated daily by measuring the weight of the petcoke burned as well as the weight of the entire coal/petcoke mixture. Records of daily petcoke blend ratios shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality along with the quarterly CEMS reports.</td>
</tr>
<tr>
<td><strong>13.</strong></td>
<td><em>(Boilers 03 and 04)</em> The owner/operator shall maintain on file all measurements including continuous monitoring system or monitoring device performance measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required in a permanent form suitable for inspection by Department personnel for at least five (5) years following the date of such measurement, maintenance, report and record.</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td><em>(Boilers 03 and 04)</em> The owner/operator shall install, operate, and maintain continuous emissions monitors (CEMS) for monitoring and reporting of opacity and emissions of NOx, and SO2.</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td><em>(Boilers 03 and 04)</em> Quarterly reports demonstrating compliance with the sulfur dioxide and nitrogen dioxide limits in accordance with 40CFR Part 60 Subpart Da shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period. These reports shall include the 30-day rolling average sulfur dioxide and nitrogen dioxide emission rates in lb/million BTU and shall not include Part 75 monitor downtime. Only actual unbiased measured values shall be used.</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td><em>(Boilers 03 and 04)</em> The owner or operator is required to submit excess emission reports for any calendar quarter during which there are excess emissions from a boiler. If there are no excess emissions during the calendar quarter, the owner or operator shall submit a report quarterly stating that excess emissions have not occurred during the reporting period. This report shall be submitted to the Manager of the Technical Management Section no later than 30 days after the reporting period.</td>
</tr>
</tbody>
</table>
### Condition Number | Conditions
--- | ---
17. | **(Boilers 03 and 04)**
A. Notwithstanding the frequency of reporting requirements specified in Condition 16 of this permit, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:
   
   i. For 1 full year (e.g., 4 quarterly or 12 monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under this part continually demonstrate that the facility is in compliance with the applicable standard;

   ii. The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the applicable standard; and

   iii. The Bureau does not object to a reduced frequency of reporting for the affected facility, as provided in paragraph (B) of this condition.

B. The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Bureau in writing of his or her intention to make such a change and the Bureau does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Bureau may review information concerning the source's entire previous performance history during the required recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Bureau to make a judgment about the source's potential for noncompliance in the future. If the Bureau disapproves the owner or operator's request to reduce the frequency of reporting, the Bureau will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Bureau to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

C. As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the non-complying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Bureau to reduce the frequency of reporting for that standard as provided for in paragraphs (A) and (B) of this condition.

18. | **(Boilers 03 and 04) 40CFR60.46a(e)** After the initial performance test required under §60.8 compliance with the sulfur dioxide emission limitations and percentage reduction requirements under §60.43a and the nitrogen oxides emission limitations under §60.44a is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30-day average emission rate for both sulfur dioxide and nitrogen oxides and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards.
<table>
<thead>
<tr>
<th>Condition Number</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>19. (Boilers 03 and 04) 40CFR60.46a(f)</strong></td>
<td>For the initial performance test required under §60.8 compliance with the sulfur dioxide emission limitations and percent reduction requirements under §60.43a and the nitrogen oxides emission limitation under §60.44a is based on the average emission rates for sulfur dioxide, nitrogen oxides, and percent reduction for sulfur dioxide for the first 30 successive boiler operating days. The initial performance test is the only test in which at least 30 days prior notice is required unless otherwise specified by the Administrator. The initial performance test is to be scheduled so that the first boiler operating day of the 30 successive boiler operating days is completed within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of the facility.</td>
</tr>
<tr>
<td><strong>20. (Boilers 03 and 04)</strong></td>
<td>The owner or operator shall submit to the Bureau the NOX and SO2 performance test data from the initial performance test and performance evaluation of the CEMS using the applicable performance specification in 40 CFR 60 Appendix B.</td>
</tr>
</tbody>
</table>
| **21. (Boiler 03 and Boiler 04) 40CFR60.43a** | On and after the date on which the initial performance test required to be conducted under §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility which combests solid fuel or solid-derived fuel, any gases which contain sulfur dioxide in excess of:  
(a)(1) 520 ng/J (1.20 lb/million Btu) heat input and 10 percent of the potential combustion concentration (90 percent reduction), or  
(a)(2) 30 percent of the potential combustion concentration (70 percent reduction), when emissions are less than 260 ng/J (0.60 lb/million Btu) heat input.  
Compliance with the emission limitation and percent reduction requirements under this section are both determined on a 30-day rolling average basis. |
| **22. (Boilers 03 and 04) 40CFR60.44a** | On and after the date on which the initial performance test required to be conducted under §60.8 is completed, no new source owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility for which construction commenced after July 9, 1997 any gases which contain nitrogen oxides (expressed as NO2) in excess of 200 nanograms per joule (1.6 pounds per megawatt-hour) gross energy output, based on a 30-day rolling average. |
| **23. (Boilers 03 and 04) 40CFR60.42a** | On and after the date on which the performance test required to be conducted under §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain particulate matter in excess of:  
(1) 13 ng/J (0.03 lb/million Btu) heat input derived from the combustion of solid, liquid, or gaseous fuel;  
(2) 1 percent of the potential combustion concentration (99 percent reduction) when combusting solid fuel. |
Condition Number | Conditions
--- | ---
24. | **(Boilers 03 and 04)** In accordance with SC Regulation 61-62.5, Standard No. 1, Emissions from Fuel Burning Operations and 40CFR 60.42a, Standards Of Performance For Electric Utility Steam Generating Units For Which Construction Is Commenced After September 18, 1978, these boilers shall not discharge into the ambient air smoke which exceeds an opacity of 20% except for one six (6) minute period per hour of not more than 27%. The opacity standards set forth above do not apply during startup or shutdown. The owner/operator shall, to the extent practicable, maintain and operate any source including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. For the opacity standards set forth above to not apply during startup or shutdown the owner/operator shall, for a period of at least five (5) years maintain a log of the time, magnitude, duration and any other pertinent information to determine periods of startup and shutdown and make these records available to a Department representative upon request.

25. | **(Boilers 03 and 04)** Source tests for PM, PM$_{10}$, SO$_2$, NO$_x$, CO, VOC, H$_2$SO$_4$, lead, mercury, HCl, HF, antimony, arsenic, cadmium, chromium, cobalt, manganese, nickel, and selenium emissions, and opacity and scrubber efficiency from Boilers 03 and 04 will be required prior to the issuance of a permit to operate. The tests shall be performed within 60 days after achieving maximum production but not later than 180 days after initial start-up. The Bureau must be notified at least two weeks prior to a source test so that a Bureau representative may be present. Source test methodology, to include testing at worst-case conditions, must be approved by the Bureau and comply with SC DHEC Regulation 61-62.1, Section IV - Source Testing.

26. | **(Boilers 01, 02, 03 and 04)** Notification of intent to source test, performance of source tests, and the reporting of source test results shall comply with Section 60.8 of Subpart A, New Source Performance Standards (NSPS), and with South Carolina Regulation 61-62.1, Section IV, Source Tests.

27. | **(Boilers 03 and 04)** 40CFR 60.47a The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the opacity of emissions discharged to the atmosphere, except where gaseous fuel is the only fuel combusted. If opacity interference due to water droplets exists in the stack (for example, from the use of an FGD system), the opacity is monitored upstream of the interference (at the inlet to the FGD system). If opacity interference is experienced at all locations (both at the inlet and outlet of the sulfur dioxide control system), alternate parameters indicative of the particulate matter control system's performance are monitored (subject to the approval of the Department and EPA).

28. | **(Facility wide)** The owner or operator shall maintain all records required by this permit for a period of five years following the date of such record.
<table>
<thead>
<tr>
<th>Condition Number</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>29.</td>
<td><strong>(Boilers 03 and 04)</strong> This source is subject to SC Regulation 61-62.96, Nitrogen Oxides (NOx) Budget Trading Program, and shall comply with all applicable provisions.</td>
</tr>
<tr>
<td>30.</td>
<td><strong>(P36, P36a, P36c-h)</strong> [40CFR60.672(a)] On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which: (1) Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf); and (2) Exhibit greater than 7 percent opacity.</td>
</tr>
<tr>
<td>31.</td>
<td><strong>(F36b, P36b, F35a-c)</strong> [40CFR60.672(b)] On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under §60.11 of this part, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity.</td>
</tr>
<tr>
<td>32.</td>
<td><strong>(P19a-f, P20a-f)</strong> [40CFR60.252(c)] On and after the date on which the performance test required to be conducted by §60.8 is completed, an owner or operator subject to the provisions of this subpart shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20 percent opacity or greater.</td>
</tr>
<tr>
<td>33.</td>
<td><strong>(P19a-f, P20a-f, Fly Ash Silo #3, Fly Ash Silo #4, F36, F36a-b, P36, P36a-h, F35a-f, CT3, CT4)</strong> In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section IX - Visible Emissions (Where Not Specified Elsewhere), where construction or modification began after December 31, 1985, emissions (including fugitive emissions) shall not exhibit an opacity greater than 20%.</td>
</tr>
</tbody>
</table>
In accordance with SC Regulation 61-62.5, Standard No. 4 - Emissions from Process Industries, Section VIII - Other Manufacturing, particulate matter emissions shall be limited to the rate specified by use of the following equations: for process weight rates less than or equal to 30 tons per hour \( E = 4.10P^{0.67} \) and for process weight rates greater than 30 tons per hour \( E = 55.0P^{0.11} - 40 \) where \( E \) = the allowable emission rate in pounds per hour and \( P \) = process weight rate in tons per hour. As such, each unit’s allowable particulate matter emission limit is limited to the amount shown in the table below at its nominal production rating:

<table>
<thead>
<tr>
<th>Process</th>
<th>Emission Limit (lbs/hr)</th>
<th>Process Weight Rate (tons/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-19a-f</td>
<td>83.0</td>
<td>1500</td>
</tr>
<tr>
<td>P-20a-f</td>
<td>83.0</td>
<td>1500</td>
</tr>
<tr>
<td>Fly Ash Silo #3</td>
<td>43.4</td>
<td>44</td>
</tr>
<tr>
<td>Fly Ash Silo #4</td>
<td>43.4</td>
<td>44</td>
</tr>
<tr>
<td>F35a</td>
<td>49.4</td>
<td>82.6</td>
</tr>
<tr>
<td>F35b</td>
<td>49.4</td>
<td>82.6</td>
</tr>
<tr>
<td>F35c</td>
<td>56.5</td>
<td>165.3</td>
</tr>
<tr>
<td>F36</td>
<td>36.7</td>
<td>26.3</td>
</tr>
<tr>
<td>F36b, P36, P36a-h</td>
<td>36.7</td>
<td>26.3</td>
</tr>
<tr>
<td>CT3</td>
<td>83.8</td>
<td>1597</td>
</tr>
<tr>
<td>CT4</td>
<td>83.8</td>
<td>1597</td>
</tr>
</tbody>
</table>

(Boilers 03 and 04) These units are subject to SC Regulation 61-62.5, Standard No. 5.1, Lowest Achievable Emission Rate (LAER) Applicable to Volatile Organic Compounds based on “Net VOC Emissions Increase” exceeding 100 tpy. LAER for these sources is determined to be Good Combustion Practices and a limit of 0.0024 lb/million BTU. Good Combustion Practices shall include operating the boilers to minimize VOC emissions by maintaining proper boiler temperature and available excess oxygen for complete combustion.

(P19a-f, P20a-f, Fly Ash Silo #3, Fly Ash Silo #4, F36, F36a-b, P36, P36a-h, F35a-f, CT3, CT4) The permittee shall perform a visual inspection on a semi-annual basis. Visual Inspection means a qualitative observation of opacity during daylight hours where the inspector records results in a log, noting color, duration, density (heavy or light), cause and corrective action taken for any abnormal emissions. The observer does not need to be certified to conduct valid visual inspections. However, at a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, and observer position relative to lighting, wind, and the presence of uncombined water. Logs shall be kept to record all visual inspections, including cause and corrective action taken for any abnormal emissions and visual inspections from date of recording. The logs shall be maintained for a period of five (5) years and be made available to the Department upon request. The owner/operator shall submit semiannual reports to the Manager of the Technical Management Section, Bureau of Air Quality postmarked no later than 30 calendar days after the end of the reporting period.
<table>
<thead>
<tr>
<th>Condition Number</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.</td>
<td><strong>(Ammonia Storage Tanks)</strong> It has been determined that these tanks will be subject to SC Regulation 61-62.68, Chemical Accident Prevention Provisions, due to in-process storage or use of a regulated substance in quantities above the specified threshold; therefore, the following must be completed:</td>
</tr>
<tr>
<td></td>
<td>1. Submittal of a Risk Management Plan (RMP) to the Environmental Protection Agency (EPA) prior to the date the regulated substance is first present above the threshold quantity in a process.</td>
</tr>
<tr>
<td></td>
<td>2. Compliance with the Risk Management Program prior to the date the regulated substance is first present above the threshold quantity in a process.</td>
</tr>
<tr>
<td></td>
<td>3. Submittal of subsequent revisions/updates of the RMP in accordance with SC Regulation 61-62.68.190.</td>
</tr>
<tr>
<td></td>
<td>If it is determined by the implementing agency (or other delegated authority) that additional relevant information is needed, this facility will be required to submit the information in a timely manner.</td>
</tr>
<tr>
<td>38.</td>
<td><strong>(Boilers 03 and 04)</strong> These emissions sources may impact an area that is projected to be designated as nonattainment for the National Ambient Air Quality Standard for ozone. This permit contains emissions limits for NOX and/or VOC’s based on the current attainment status of the area and consistent with other State and Federal requirements. Should the area be designated nonattainment for ozone, the Department may reopen this permit, and the current emissions limits may be revised to address attainment of the ozone standard. The owner or operator of this source is advised to take appropriate steps to assure that operations and/or control devices permitted herein can be readily modified, added to, or retrofitted as necessary.</td>
</tr>
<tr>
<td>39.</td>
<td><strong>(Boilers 03 and 04)</strong> The owners and operators, and to the extent applicable, the NOX authorized account representative of a NOX Budget unit, shall comply with the monitoring and reporting requirements as provided in subpart H of SC Regulation 61-62.96 and in subpart H of 40 CFR part 75. For purposes of complying with such requirements, the definitions in SC Regulation 61-62.96.2 and in 40 CFR part 72 section 72.2 shall apply, and the terms “affected unit,” “designated representative,” and “continuous emission monitoring system” (or “CEMS”) in 40 CFR part 75 shall be replaced by the terms “NOX Budget unit,” “NOX authorized account representative,” and “continuous emission monitoring system” (or “CEMS”), respectively, as defined in SC Regulation 61-62.96.2.</td>
</tr>
<tr>
<td>Condition Number</td>
<td>Conditions</td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| **40.** (Boilers 03 and 04) | The NOX authorized account representative shall comply with all record keeping and reporting requirements in SC Regulation 61-62.96.74 and with the requirements of SC Regulation 61-62.96.10(e). Quarterly reports, as specified in SC Regulation 61-62.96.74(d), shall be sent to EPA and to SC DHEC, Bureau of Air Quality’s Technical Management Section at the addresses listed below.  
  
  US EPA, Region 4  
  Air Enforcement Branch  
  61 Forsyth Street  
  Atlanta, GA 30303  
  SC DHEC - BAQ  
  Technical Management Section  
  2600 Bull Street  
  Columbia, SC 29201  
  If the NOX authorized account representative for a NOX Budget unit subject to an Acid Rain Emission limitation who signed and certified any submission that is made under subpart F or G of 40 CFR part 75 and which includes data and information required under this subpart or subpart H of 40 CFR part 75 is not the same person as the designated representative or the alternative designated representative for the unit under 40 CFR part 72, the submission must also be signed by the designated representative or the alternative designated representative. |
| **41.** (Boilers 03 and 04) | Unless otherwise provided, the owners and operators of the NOX Budget source and each NOX Budget unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Department or the EPA.  
  
  (i) The account certificate of representation for the NOX authorized account representative for the source and each NOX Budget unit at the source and all documents that demonstrate the truth of the statements in the account certificate of representation, in accordance with Section 96.13; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new account certificate of representation changing the NOX authorized account representative.  
  
  (ii) All emissions monitoring information, in accordance with subpart H of this regulation; provided that to the extent that subpart H of this regulation provides for a 3-year period for record keeping, the 3-year period shall apply.  
  
  (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the NOX Budget Trading Program.  
  
  (iv) Copies of all documents used to complete a NOX Budget permit application and any other submission under the NOX Budget Trading Program or to demonstrate compliance with the requirements of the NOX Budget Trading Program. |
<p>| <strong>42.</strong> (Boilers 01, 02, 03, and 04) | These boilers shall not exceed an SO2combined emission rate of 8.25 tons for any 3-hour period to comply with SC Regulation 61-62.5, Standard No. 2. The owner/operator shall maintain records of all 3-hour rolling sum emissions for the four combined boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period. |</p>
<table>
<thead>
<tr>
<th>Condition Number</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.</td>
<td>(Boilers 01, 02, 03, and 04) These boilers shall not exceed an SO(_2) combined emission rate of 60 tons for any 24-hour period to comply with SC Regulation 61-62.5, Standard No. 2. The owner/operator shall maintain records of all 24-hour rolling sum emissions for the four combined boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>44.</td>
<td>(Boilers 01, 02, 03 and 04) When Boilers 01 and 02 are offline for the 24-hour period, Boilers 03 and 04 are limited to an SO(_2) emission rate of 0.44 lb/million BTU. This emission limit shall be determined by a 24-hour rolling average with emissions and heat input averaged arithmetically across the boilers.</td>
</tr>
<tr>
<td>45.</td>
<td>(Boilers 01, 02, 03 and 04) When Boilers 01 and/or 02 are online and Boilers 03 and/or 04 online, the boilers are limited to an SO(_2) emission rate of 0.38 lb/million BTU. This emission limit shall be determined by a 24-hour rolling average with emissions and heat input averaged arithmetically across the boilers.</td>
</tr>
<tr>
<td>46.</td>
<td>(Boilers 01, 02, 03, and 04) These boilers shall not exceed an SO(_2) combined emission rate of 15,823 tons/year to comply with SC Regulation 61-62.5, Standard No. 7 avoidance. The owner/operator shall maintain records of all 365-day rolling sum emissions for the four combined boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>47.</td>
<td>(Boilers 03 and 04) Each of these two boilers shall not exceed an SO(_2) emission rate of 3,250 tons per year (6,500 tons per year combined) or drop below an annual scrubbing efficiency of 95%. This is a PSD avoidance limit for emissions of this pollutant from these sources. The owner/operator shall maintain records of all 365-day rolling sum emissions for the two combined boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>48.</td>
<td>(Boilers 03 and 04) Each of these two boilers shall not exceed an SO(_2) average annual emission rate of 0.13 lb/million BTU. This is an agreed upon established rate for each of these boilers for PSD considerations. The owner/operator shall maintain records of all 365-day rolling average emission rates for each of the two boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>49.</td>
<td>(Boilers 03 and 04) SO(_2) and NO(_x), netting limitations are stated in this permit for PSD avoidance. The permit also requires that these reductions will be verified by monitoring the CEMS for these pollutants. CEMS are not available to monitor H(_2)SO(_4) Mist reductions. Therefore, the monitoring of SO(_2) will suffice for verification of reduction due to the correlation of SO(_2) in the formation of H(_2)SO(_4) Mist.</td>
</tr>
<tr>
<td>Condition Number</td>
<td>Conditions</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>50.</td>
<td><strong>(Boiler 01)</strong> Upon operation of Boiler 03 or Boiler 04, whichever comes first, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of SO₂ PSD applicability, SO₂ emissions from Boiler 01 shall be limited to annual rates of 5,295 tons per year, 0.23 pounds per million BTU, and 86% removal efficiency. This establishes the SO₂ baseline emission level for Boiler 01 as a limit, with initial SO₂ project offsets resulting from reductions on Boiler 02. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td>51.</td>
<td><strong>(Boiler 01)</strong> Upon operation of both Boiler 03 and Boiler 04, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of SO₂ PSD applicability, SO₂ emissions from Boiler 01 shall be limited to annual rates of 3,350 tons per year, 0.15 pounds per million BTU, and 91% removal efficiency. This reduction from an actual baseline level of 5,295 tons per year by improved scrubber efficiency contributes 1,945 tons per year to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td>52.</td>
<td><strong>(Boiler 02)</strong> Upon operation of Boiler 03 or Boiler 04, whichever comes first, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of SO₂ PSD applicability, SO₂ emissions from Boiler 02 shall be limited to annual rates of 7,278 tons per year, 0.32 pounds per million BTU, and 75% removal efficiency. This reduction from an actual baseline level of 10,528 tons per year by improved scrubber efficiency contributes 3,250 tons per year to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td>53.</td>
<td><strong>(Boiler 02)</strong> Upon operation of both Boiler 03 and Boiler 04, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of SO₂ PSD applicability, SO₂ emissions from Boiler 02 shall be limited to annual rates of 5,973 tons per year, 0.26 pounds per million BTU, and 86% removal efficiency. This additional reduction from an actual baseline level of 10,528 tons per year by improved scrubber efficiency contributes 1,305 tons per year (total reduction of 4,555 tons per year) to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td>54.</td>
<td><strong>(Boilers 01, 02, 03, and 04)</strong> The four combined boilers shall not exceed a NOₓ combined emission rate of 15,056 tons per year to comply with SC Regulation 61-62.5, Standard No. 7 avoidance. The owner/operator shall maintain records of all 365-day rolling sum emissions for the four combined boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>55.</td>
<td><strong>(Boilers 03 and 04)</strong> Each of these two boilers shall not exceed a NOₓ emission rate of 2,278 tons per year (4,556 tons per year combined). This is a PSD avoidance limit for emissions of this pollutant from these sources. The owner/operator shall maintain records of all 365-day rolling sum emissions for each of the two boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td>Condition Number</td>
<td>Conditions</td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
</tr>
<tr>
<td><strong>56.</strong></td>
<td><em>(Boilers 03 and 04)</em> Each of these two boilers shall not exceed a NO(_X) average annual emission rate of 0.08 pounds per million BTU. This rate is an agreed-upon established maximum rate for each of these boilers for PSD considerations. The owner/operator shall maintain records of all 365-day rolling average emission rates for each of the two boilers for a period of at least five (5) years from the date generated, and shall make these records available to Department personnel upon request. Quarterly reports shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality, postmarked no later than 30 calendar days after the end of the reporting period.</td>
</tr>
<tr>
<td><strong>57.</strong></td>
<td><em>(Boiler 01)</em> Upon operation of Boiler 03 or Boiler 04, whichever comes first, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of NO(_X) PSD applicability, NO(_X) emissions from Boiler 01 shall be limited to 6,116 tons per year and 0.27 pounds per million BTU. This establishes the NO(_X) baseline emission level for Boiler 01 as a limit, with initial NO(_X) project offsets resulting from reductions on Boiler 02. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td><strong>58.</strong></td>
<td><em>(Boiler 01)</em> Upon operation of both Boiler 03 and Boiler 04, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of NO(_X) PSD applicability, NO(_X) emissions from Boiler 01 shall be limited to 5,000 tons per year and 0.22 pounds per million BTU. This reduction from an actual baseline level of 6,116 tons per year by operation of SCR controls contributes 1,116 tons per year to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td><strong>59.</strong></td>
<td><em>(Boiler 02)</em> Upon operation of Boiler 03 or Boiler 04, whichever comes first, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of NO(_X) PSD applicability, NO(_X) emissions from Boiler 02 shall be limited to 6,662 tons per year and 0.29 pounds per million BTU. This reduction from an actual baseline level of 8,940 tons per year by operation of SCR controls contributes 2,278 tons per year to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td><strong>60.</strong></td>
<td><em>(Boiler 02)</em> Upon operation of both Boiler 03 and Boiler 04, in order to achieve offsetting emissions for Boilers 03 and 04 to net out of NO(_X) PSD applicability, NO(_X) emissions from Boiler 02 shall be limited to 5,500 tons per year and 0.24 pounds per million BTU. This additional reduction from an actual baseline level of 8,940 tons per year by operation of SCR controls contributes 1,162 tons per year (total of 3,440 tons per year) to the offset. These limits are based on 365-day rolling sums and averages.</td>
</tr>
<tr>
<td><strong>61.</strong></td>
<td><em>(Boilers 03 and 04)</em> The owner/operator shall establish a startup/shutdown plan detailing how emissions during startup and shutdown will be minimized. Also, included in this plan the owner/operator shall establish how operation of the boilers at low utilization will be minimized. This plan shall be submitted to the Bureau’s Technical Management Section prior to operation of either Boiler 03 or 04.</td>
</tr>
</tbody>
</table>
62. **(Boilers 01 – 04)** The EPA is currently investigating compliance with New Source Review (NSR) requirements at several coal-fired utilities. The outcome of EPA's on-going investigation may result in a determination of NSR applicability that could impact the values used by Santee Cooper in calculating baseline and potential emission reduction credits for sources subject to this permitting action. If any of the values relied on in the emission calculations for these sources change as a result of a subsequent enforcement action by EPA, the terms of this construction permit and any subsequently issued operating permit must be revised as necessary to ensure compliance. The revisions which may be required in the future to achieve compliance with NSR may include, but are not limited to, modeling, the installation of additional control equipment and/or monitoring equipment, the generation or purchase of additional emission reduction credits, and modifications to the control equipment authorized to be constructed and/or modified by this permit.

### E. EXEMPT SOURCES

<table>
<thead>
<tr>
<th>Equip ID</th>
<th>Exempt Source Description (Exemption Date)</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>D04</td>
<td>1,500 kW Emergency Generator (2003)</td>
<td>61-62.1, Section II(F)(2)(e)</td>
</tr>
<tr>
<td>D05</td>
<td>1,500 kW Emergency Generator (2003)</td>
<td>61-62.1, Section II(F)(2)(e)</td>
</tr>
<tr>
<td>FP</td>
<td>380 HP Fire Pump (2003)</td>
<td>61-62.1, Section II(F)(2)(e)</td>
</tr>
<tr>
<td>#2 Fuel Oil Tank (Unit 4)</td>
<td>300,000 gallon No. 2 fuel oil storage tank</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>TDLOT1</td>
<td>16,000 gallon lube oil storage tank</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>TDLOT2</td>
<td>16,000 gallon lube oil storage tank</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>EGFT1</td>
<td>1,000 gallon No. 2 fuel oil storage tank for D04</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>EGFT2</td>
<td>1,000 gallon No. 2 fuel oil storage tank for D05</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LORT1</td>
<td>6,400 gallon lube oil reservoir storage tank for turbine</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LORT2</td>
<td>6,400 gallon lube oil reservoir storage tank for turbine</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LOCST1</td>
<td>2,000 gallon clean lube oil storage tank for turbine</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>Equip ID</td>
<td>Exempt Source Description (Exemption Date)</td>
<td>Basis</td>
</tr>
<tr>
<td>----------</td>
<td>--------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>LOCST2</td>
<td>2,000 gallon clean lube oil storage tank for turbine</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LOR1</td>
<td>6,400 gallon turbine lube oil reservoir</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LOR2</td>
<td>6,400 gallon turbine lube oil reservoir</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LOCT1</td>
<td>2,000 gallon turbine clean lube oil tank</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>LOCT2</td>
<td>2,000 gallon turbine clean lube oil tank</td>
<td>61-62.1, Section II(F)(2)(g)</td>
</tr>
<tr>
<td>F37</td>
<td>Limestone truck unloading</td>
<td>61-62.1, Section II(F)(2)(g, h)</td>
</tr>
</tbody>
</table>

Carl W. Richardson, P.E., Director
Engineering Services Division
Bureau of Air Quality
### AMBIENT AIR QUALITY STANDARDS - STANDARD 2

<table>
<thead>
<tr>
<th>STACK</th>
<th>Modeled Emission Rates (lbs/hr)</th>
<th>TSP</th>
<th>PM$_{10}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
<th>CO</th>
<th>Lead</th>
<th>HF</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROSS1</td>
<td></td>
<td>156.03</td>
<td>156.03</td>
<td>1193</td>
<td>819.8</td>
<td>884</td>
<td>0.0877</td>
<td>1.59</td>
</tr>
<tr>
<td>CROSS2</td>
<td></td>
<td>156.03</td>
<td>156.03</td>
<td>1193</td>
<td>819.8</td>
<td>884</td>
<td>0.0877</td>
<td>1.59</td>
</tr>
<tr>
<td>CROSS3 (See Note 2)</td>
<td></td>
<td>205.24</td>
<td>205.24</td>
<td>2615</td>
<td>1798</td>
<td>1938</td>
<td>0.1922</td>
<td>3.48</td>
</tr>
<tr>
<td>CRUSH</td>
<td>0.1825</td>
<td>0.1825</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW1</td>
<td>1.8566</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW2</td>
<td>1.8721</td>
<td>1.8721</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW3</td>
<td>1.8566</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW4</td>
<td>1.8566</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P02</td>
<td>0.8254</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P03</td>
<td>0.8254</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P05</td>
<td>0.8254</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>F02</td>
<td>0.8254</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>F33</td>
<td>0.8254</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Facility Total</td>
<td>529.05</td>
<td>529.05</td>
<td>5001 *</td>
<td>3437.6</td>
<td>3706</td>
<td>0.3676</td>
<td>6.66</td>
<td></td>
</tr>
</tbody>
</table>

* Note 1 - The limits on all 4 units combined are 8.25 tons/3-hr, 60 tons/day and 15823 tons/yr of SO$_2$, and 15056 tons/yr of NO$_X$. These emission rates were modeled from Cross3.

Note 2 – Emissions shown above from Stack Cross3 include Cross 03 emissions and Cross 04 emissions.

### CLASS II PREVENTION OF SIGNIFICANT DETERIORATION - STANDARD 7

<table>
<thead>
<tr>
<th>STACK</th>
<th>Modeled Emission Rates (lbs/hr)</th>
<th>PM$_{10}$</th>
<th>SO$_2$</th>
<th>NO$_X$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CROSS1 (5200 million BTU/Hr Boiler 1)</td>
<td></td>
<td>156.03</td>
<td>1193</td>
<td>819.8</td>
</tr>
<tr>
<td>CROSS2 (5200 million BTU/Hr Boiler 2)</td>
<td></td>
<td>156.03</td>
<td>1193</td>
<td>819.8</td>
</tr>
<tr>
<td>CROSS3 (5700 million BTU/Hr each Boilers 3 and 4) (See Note 2)</td>
<td>205.24</td>
<td>2615</td>
<td>1798</td>
<td></td>
</tr>
<tr>
<td>CRUSH (Crusher Tower)</td>
<td>0.1825</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW1 (Unit 1 Cooling Tower)</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW2 (Unit 2 Cooling Tower)</td>
<td>1.8721</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW3 (Unit 3 Cooling Tower)</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CTOW4 (Unit 4 Cooling Tower)</td>
<td>1.8566</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P02 (Conveyor Transfer to Stacker/Reclaim)</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>P03 (Emergency Stockout Conveyor Drop to Pile)</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>P05 (Conveyor Drop to Transfer Tower)</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>F02 (Conveyor Drop to Sample Tower)</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>F33 (Petcoke Drop to Conveyor)</td>
<td>0.8254</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Facility Total</td>
<td>529.05</td>
<td>5001 *</td>
<td>3437.6</td>
<td>3706</td>
</tr>
</tbody>
</table>

* Note 1 - The limits on all 4 units combined are 8.25 tons/3-hr, 60 tons/day and 15823 tons/yr of SO$_2$, and 15056 tons/yr of NO$_X$. These emission rates were modeled from CROSS3.

Note 2 – Emissions shown above from Stack Cross3 include Cross 03 emissions and Cross 04 emissions.
**Description of Material Handling Emission Sources**

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>TYPE OF SOURCE</th>
<th>CONTROL DEVICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COAL HANDLING:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coal Bunkers P19a-f</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>Coal Bunkers P20a-f</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>FLY ASH HANDLING:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fly Ash Silo #3</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>Fly Ash Silo #4</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>LIMESTONE HANDLING:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F36</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F36a</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F36b</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>P36</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36a</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36b</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>P36c</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36d</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36e</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36f</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36g</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>P36h</td>
<td>Point</td>
<td>Baghouse</td>
</tr>
<tr>
<td>GYPSUM HANDLING:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F35a</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F35b</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F35c</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F35e</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F35d</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>F35f</td>
<td>Fugitive</td>
<td>Uncontrolled</td>
</tr>
<tr>
<td>COOLING TOWER:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CT3</td>
<td>Fugitive</td>
<td>Drift Eliminator</td>
</tr>
<tr>
<td>CT4</td>
<td>Fugitive</td>
<td>Drift Eliminator</td>
</tr>
</tbody>
</table>
January 14, 2004

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO: 4530-1

Mr. Scott A. Patulski
Vice President, Fossil Operations
231 W. Michigan
Milwaukee, WI 53201

Dear Mr. Patulski:

Your application for an air pollution control construction permit has been processed in accordance with sec. 285.61, Wis. Stats.

The enclosed construction permit is issued to provide authorization for your source to construct and initially operate an Electric Generating Facility referred as Elm Road Generating Station – North Site With Accommodations at 4801 E. Elm Road, Oak Creek, Wisconsin in accordance with the requirements and conditions set forth within Parts I and II of the permit. Please read it carefully. This permit expires 90 months after the day this permit is issued. This source may not operate after this construction permit expires unless you have been issued an operation permit.

Enclosed with the permit there are two copies of a bill for the cost of reviewing and acting upon your air pollution control permit. This bill is due and payable within 30 days of the date of the issuance of the permit. Your check should be made payable to Wisconsin Department of Natural Resources and returned to the address on the bill. Please include one copy of the bill with your payment.

A copy of this permit should be available at the source for inspection by any authorized representative of the Department. Questions about this permit should be directed to the Wisconsin Department of Natural Resources, Wisconsin Department of Natural Resources, Southeast Region, 2300 North Dr. Martin Luther King Jr. Drive, Milwaukee, WI 53212, Phone (414) 263-8500

NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that Wisconsin statutes establish time periods within which requests to review Department decisions must be filed.

To request a contested case hearing pursuant to s. 285.81, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for a contested case hearing on the Secretary of the Department of Natural Resources. Any such petition for hearing shall set forth specifically the issues sought to be reviewed, the interest of the petitioner, the reasons why a hearing is warranted and the relief desired.
For judicial review of a decision pursuant to ss. 227.52 and 227.53, Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review shall name the Department of Natural Resources as the respondent.

This notice is provided pursuant to s. 227.48(2), Stats.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

Raj Vakharia, Review Engineer
Permits & Stationary Source Modeling Section
Bureau of Air Management

cc:   SER Air Program Air Program
      SER, Sturtevant Service Center Air Program
      US EPA Region V
      Kathy Zuelsdorff, PSC, 610 N. Whitney Way, P.O. Box 7854, Madison, WI 53707-7854

Enclosure
BEFORE THE DEPARTMENT OF NATURAL RESOURCES
AIR MANAGEMENT PROGRAM
FINDINGS OF FACT
CONCLUSIONS OF LAW
AND DECISION

Findings of Fact

The Department of Natural Resources (DNR) finds that:

1) Elm Road Generating Station (Referred as North Site with Accommodations), 4801 E. Elm Road, Oak Creek, Wisconsin, Wisconsin has applied for an air pollution control construction permit. The authorized representative of the facility is Scott A. Patulski – Vice President, Fossil Operations.

2) Elm Road Generating Station (Referred as North Site with Accommodations), submitted an air pollution control permit application and plans and specifications and any additional information describing the air contaminant source between June 18, 2002 and January 9, 2004.

3) DNR has reviewed Elm Road Generating Station (Referred as North Site with Accommodations)'s air permit application and the plans and specifications submitted to DNR.

4) This permit is for an air contaminant source.

5) DNR has complied with the procedures set forth in s. 285.61, Stats.

6) The proposed air contaminant source meets all of the applicable criteria in s. 285.63, Stats.

7) DNR has complied with the requirements of s. 1.11, Stats., and ch. NR 150, Wis. Adm. Code.

Conclusions of Law

DNR concludes that:

1) DNR has authority under s. 285.11(a), Stats., to promulgate rules contained in chs. NR 400-499, Wis. Adm. Code, including, but not limited to, rules containing emission limits, compliance schedules and compliance determination methods.

2) DNR has the authority under ss. 285.11(a), (e), and (f), 285.27 and 285.65, Stats., and chs. NR 400-499, Wis. Adm. Code, to establish emission limits for sources of air pollution.

3) DNR has the authority to issue air pollution control permits and to include conditions in such permits under ss. 285.60, 285.61, 285.63 and 285.65, Stats.

4) The emission limits included in this permit are authorized by ss. 285.65, Stats., and NR 400-499, Wis. Adm. Code.

5) DNR is required to comply with s. 1.11, Stats., and ch. NR 150, Wis. Adm. Code, in conjunction with issuing an air pollution control permit.
Decision

Elm Road Generating Station (Referred as North Site with Accommodations), is authorized to construct and initially operate an Electric Generating Facility referred at 4801 E. Elm Road, Oak Creek, Wisconsin, as described in the plans and specifications dated between June 18, 2002 and January 9, 2004 in conformity with the emission limits, monitoring, recordkeeping and reporting requirements and specific and general conditions set forth in this permit.
AIR POLLUTION CONTROL CONSTRUCTION PERMIT

EI FACILITY NO.  

PERMIT NO. 03-RV-166

STACK NO.(S). S18 –S174  

SOURCE NO.(S). B18, B19, B20, P62, P63, P64, P175, P76P, P41, P42, P43, B44, T16, T188, T121, T122, T123, T119, T120

THIS CONSTRUCTION PERMIT EXPIRES NINETY (90) MONTHS FROM THE DATE OF ISSUANCE OR WHEN THE OPERATION PERMIT IS ISSUED FOR THE EMISSION UNITS INCLUDED IN THIS PERMIT, WHICHEVER COMES FIRST.

In compliance with the provisions of Chapter 285, Wis. Stats., and Chapters NR 400 to NR 499, Wis. Adm. Code,

Name of Source: Elm Road Generating Station (Referred as North Site with Accommodations)

Street Address: 4801 E. Elm Road
Oak Creek, Milwaukee County, Wisconsin

Responsible Official & Title: Scott A. Patulski – Vice President, Fossil Operations

is authorized to construct and initially operate an Electric Generating Facility described in the plans and specifications submitted between June 18, 2002 and January 9, 2004 in conformity with the conditions herein.

This authorization requires compliance by the permit holder with the emission limitations, monitoring requirements and other terms and conditions set forth in Parts I and II hereof.

Dated at Madison, Wisconsin this 14th day of January 2004

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
For the Secretary

By signed by Lloyd L. Eagan
Lloyd L. Eagan, Director
Bureau of Air Management
PART I: APPLICABLE LIMITATIONS

A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 1. Particulate Matter Emissions

**a. Limitations:** 0.018 pound per million Btu heat input averaged over any consecutive 3-hour period. (Best Available Control Technology, BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08(2), Wis. Adm. Code, s. NR 440.20(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

See Note 1

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.1 [s. NR 439.07, Wis. Adm. Code]

2. Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
   a. The stack height shall be at least 550 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
   b. The stack inside diameter at the outlet may not exceed 27 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse system in combination with a flue gas desulfurization and a wet electrostatic precipitator to meet the BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a).1, Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.A.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. The permittee shall perform the compliance emission tests required under condition I.A.1.b.(1) every 24 months within 60 days from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5 or 5B including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code; s. NR 440.20(8)(b)2., Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall record the pressure drop across the fabric filter baghouse system at the beginning of each operating shift. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

4. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

5. The permittee shall continuously monitor the operating pressure drop across the fabric filter system and shall sound an audible alarm, whenever the operating pressure drop is below minimum pressure drop identified in I.A.1.b.(5) is exceeded. [s. NR 439.055(1)(b)1., Wis. Adm. Code]

6. The permittee shall respond to every “out of range” pressure drop alarm in accordance with the provisions of 40 CFR 64.7(d)(1). [s. 285.65(3), Wis. Stats.]

7. The permittee shall install, calibrate, maintain, and continuously operate a fabric filter bag leak detection system and be equipped with an audible alarm. [s. 285.65(3), Wis. Stats.]

8. The alarm set point and alarm delay time for each bag leak detection system shall be established during the initial testing period. [s. 285.65(3), Wis. Stats.]

Note 1: The boiler is subject to New Source Performance Standards (NSPS) requirements for particulate matter under s. NR 440.20(3), Wis. Adm. Code and is 0.03 pound per million Btu and 99% reduction when combusting solid fuel. The BACT limit for particulate matter is more restrictive than the particulate matter emission limits under NSPS, thus the boiler is expected to meet the particulate matter emission limits under NSPS.

1 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each SCPC boiler.

<table>
<thead>
<tr>
<th>Pollutant: 1. Particulate Matter Emissions [CONTINUED]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(8) The permittee shall comply with the NSPS compliance determination procedures and methods per s. NR 440.20(6), Wis. Adm. Code and s. NR 440.20(8), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(9) The permittee shall record the output of the fabric filter bag leak detection system. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(10) The permittee shall respond to every bag leak detection alarm in accordance with the provisions of 40 CFR 64.7(d)(1). [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(11) The permittee shall comply with the NSPS reporting requirements per s. NR 440.20(9), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

Pollutant: 2. Particulate Matter Emissions less than 10 microns (PM10)

a. Limitations: 0.018 pound per million Btu heat input averaged over any consecutive 3–hour period. (BACT) [s. NR 405.08(2), Wis. Adm. Code and s. 285.65(3), Wis. Stats.]

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.1 [s. NR 439.07, Wis. Adm. Code]

(2) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

(a) The stack height shall be at least 550 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(b) The stack inside diameter at the outlet may not exceed 27 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(4) The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a).1, Wis. Adm. Code]

(5) The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.A.2.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(7) The permittee shall perform the compliance emission tests required under condition I.A.2.b.(1) every 24 months within 60 days from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5 or 5B including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code; s. NR 440.20(8)b2., Wis. Adm. Code]

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) The permittee shall record the pressure drop across the fabric filter baghouse system at the beginning of each operating shift. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) The permittee shall continuously monitor the pressure drop across the fabric filter system and shall sound an audible alarm, whenever the operating pressure drop is below the minimum pressure drop identified in I.A.2.b.(5) is exceeded. [s. NR 439.055(1)(b)1., Wis. Adm. Code]

(6) The permittee shall respond to every “out of range” pressure drop alarm in accordance with the provisions of 40 CFR 64.7(d)(1). [s. 285.65(3), Wis. Stats.]

(7) The permittee shall install, calibrate, maintain, and continuously operate a fabric filter bag leak detection system and be equipped with an audible alarm. [s. 285.65(3), Wis. Stats.]

(8) The alarm set point and alarm delay time for each bag leak detection system shall be established during the initial testing period. [s. 285.65(3), Wis. Stats.]

(9) The permittee shall record the output of the fabric filter bag leak detection system. [s. 285.65(3), Wis. Stats.]

(10) The permittee shall respond to every bag leak detection alarm in accordance with the provisions of 40 CFR 64.7(d)(1). [s. 285.65(3), Wis. Stats.]

If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2
The following emission limits apply to each SCPC boiler.

<table>
<thead>
<tr>
<th>Pollutant: 1. Particulate Matter Emissions less than 10 microns (PM$_{10}$) [CONTINUED]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(8) The permittee shall comply with the NSPS compliance determination procedures and methods per s. NR 440.20(6), Wis. Adm. Code and s. NR 440.20(8), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(11) The permittee shall comply with the NSPS reporting requirements per s. NR 440.20(9), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 3. Sulfur Dioxide

**a. Limitations:**

1. 0.15 pound per million Btu heat input for all periods, including startup and shut down, averaged over any consecutive 30-day period. (BACT)
2. Uncontrolled sulfur dioxide emission rate in the coal shall be limited to 4.0 pound per million Btu, averaged over any consecutive 30-day period. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.20(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

See Note 1

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]
2. Sulfur Dioxide Emissions shall be controlled by the use of wet flue gas desulfurization (FGDS) System to meet the BACT emission limits. [s. NR 405.08(2), Wis. Adm. Code]
3. The absorber recirculation (AR) slurry flow rate to the wet flue gas desulfurization (FGD) system shall be periodically monitored and maintained within the range specified under condition I.A.3.c.(4). [s. 285.65(3), Wis. Stats.]
4. (a) The boiler may be fired on coal and/or coal/ash fuel blend, except during periods of start-up and load stabilization when natural gas and/or low sulfur fuel oil may also be utilized as a fuel. (b) The amount of ash fired in the boiler may not exceed 5% by weight averaged over any consecutive 30 day period. [s. NR 405.08(2), Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
5. (a) The permittee shall demonstrate compliance with the coal sulfur limit in I.A.3.a.(2)] by utilizing coal sampling and analysis of the coal as it is shipped from the mine. (b) The permittee shall provide the sampling and analysis protocol at least four months prior to the initial operation of the boiler to the Department for approval. (c) In the event that mine sampling and analysis is unavailable, the permittee shall use as received fuel sampling and analysis procedures in accordance with s. NR 439.08, Wis. Adm. Code to demonstrate compliance with this limit. (d) In lieu of fuel sampling and analysis, the permittee may demonstrate compliance with the coal sulfur limit in I.A.3.a.(2) by using emissions data measured by a continuous emission monitoring system at the inlet to the FGD system. [s. 285.65(3), Wis. Stats., s. NR 439.08, Wis. Adm. Code]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A or 6C shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(2), Wis. Adm. Code]
2. (a) The permittee shall install, calibrate, maintain and operate a continuous emission monitoring system, and record the output of the system, for measuring the sulfur dioxide and oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide emissions are monitored. (b) Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 75, s. NR 440.20(7)(b), Wis. Adm. Code and s. NR 439.06(4), Wis. Adm. Code. [s. 285.65(10), Wis. Stats.]
3. The permittee shall use continuous emission monitoring methods and procedures under s. NR 440.20(7)(b), Wis. Adm. Code and s. NR 439.09, Wis. Adm. Code to comply with the NSPS monitoring requirements. [s. NR 439.09, Wis. Adm. Code]
4. The permittee shall provide to the department, at least 4 months prior to the expiration of the construction permit, information on the operational absorber recirculation (AR) slurry flow rate to the FGD system to be used for monitoring the absorber recirculation (AR) slurry flow rate to the FGD system, as required under condition I.A.3.b.(2), and shall incorporate this information into the Malfunction Prevention and Abatement Plan. (MPAP) [s. 285.65(10), Wis. Stats.]
5. The permittee shall submit quarterly reports to the Department on the information required under condition I.A.3.b.(5) for each train of coal received during the calendar quarter. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

Note 1: The proposed boiler is subject to NSPS requirement for sulfur dioxide under s. NR 440.20(4), Wis. Adm. Code. The NSPS limit for sulfur dioxide varies depending upon fuel sulfur content, with either a 90% reduction and 1.2 pound per million Btu limitations or a 70% reduction when emissions are below 0.60 pound per million Btu. The NSPS limits apply at all times except during periods of startup, shut down or when emergency conditions exist and the procedures under s. NR 440.20(6)(d), Wis. Adm. Code is implemented. The BACT limits for sulfur dioxide is more restrictive then the sulfur dioxide emission limits under NSPS, thus the boiler is expected to meet the sulfur dioxide emission limits under NSPS.
### A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler. [CONTINUED]

#### Pollutant: 3. Sulfur Dioxide (continued)

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) The permittee shall demonstrate compliance with the sulfur dioxide emission limits contained in I.A.3.a. (1) Using emissions data measured by the continuous emission monitoring system required by I.A.3.c. (2) as follows:</td>
<td>(6) The permittee shall comply with the NSPS reporting requirements per s. NR 440.20(9), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(a) Daily average concentration shall be calculated each calendar day by combining the sulfur dioxide concentration and diluent concentration (in % O2 or % CO2) measurement consistent with the procedures specified in 40 CFR Part 75 Appendix F. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(7) The permittee shall keep appropriate records to comply with permit condition I.A.3.b. (9). [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(7) The permittee shall perform the compliance emission tests required under condition I.A.3.b.(1) every 24 months within 60 days from the date of the last stack test as long as the permit remains valid. [s. NR 439.075(3)(b) Wis. Adm. Code]</td>
<td>(8) The permittee shall keep appropriate records to ensure compliance with permit condition I.A.3.b.(4)(b). [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(8) The permittee shall comply with the NSPS compliance determination procedures and methods per s. NR 440.20(6), Wis. Adm. Code and s. NR 440.20(8), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(9) (a) Sulfur dioxide emissions shall be limited to 1,150 pounds per hour averaged over any consecutive 3-hour period and sulfur dioxide emissions shall be limited to 1,050 pounds per hour averaged over any consecutive 24-hour period. These conditions are established to ensure compliance with PSD increments and NAAQS. At these emission rates the air quality standards are expected to be protected. [s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(b) The permittee shall use the CEMs data to demonstrate compliance with permit condition I.A.3.b. (9)(a). [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler
The following emission limits apply to each SCPC boiler.

Pollutant: 4. Oxides of Nitrogen (NOx)

a. Limitations: (1) 0.07 pound per million Btu heat input during normal operation not including periods of startup and shut down, averaged over any consecutive 30-day period. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]; (2) 0.07 pound per million Btu heat input for all periods including startup and shut down, averaged over any consecutive 12-month period. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.20(5)a.1., Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Notes 1, 2, 3

b. Compliance Demonstration:
(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.2 [s. NR 439.07, Wis. Adm. Code]
(2) Nitrogen Oxide Emissions shall be controlled using low NOx burners, good combustion practices and a Selective Catalytic Reduction (SCR) System to meet the BACT emission limits. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
(3) The permittee shall demonstrate compliance with the NOx emission limit as follows:
(a) NOx emissions shall be calculated based on each 24-hour calendar period.
(b) 24 hour emissions shall be calculated by combining the NOx concentration and diluent concentration (in % O2 or % CO2) measurement consistent with the procedures specified in 40 CFR Part 75 Appendix F.
(c) 12 consecutive months concentrations shall be calculated based on the calculations of the daily concentrations. [s. 285.65(3), Wis. Stats.]
(4) The permittee shall maintain the ranges of the parameters identified in condition I.A.4.c.(5)a.-d., to meet good combustion practices and/or maintain proper operation of the SCR. [s. 285.65(3), Wis. Stats.]
(5) The permittee shall perform the compliance emission tests required under condition I.A.4.b.(1) every 60 months within 60 days from the date of the last stack test as long as the permit remains valid. [s. NR 439.075(3)(b) Wis. Adm. Code]

(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, US EPA Method 7 or an alternate method approved in writing by the Department shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(6), Wis. Adm. Code]
(2) The permittee shall install and operate continuous emissions monitoring systems (CEMs) for NOx and carbon dioxide or oxygen within 60 days after initial start up of the boiler. The CEMs shall be calibrated within 90 days after initial start up of the boiler. Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 75, s. NR 440.20(7)(a), Wis. Adm. Code and s. NR 439.06(6)(b), Wis. Adm. Code requirements.[s. 285.65(5), Wis. Stats.; s. NR 439.06, Wis. Adm. Code]
(3) The permittee shall certify the CEMs in accordance with 40 CFR Part 75 Appendix A. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
(4) The permittee shall keep appropriate records of the strip chart, round chart or data acquisition (DAS) system/electronic data storage continuously. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
(5) During operation, the facility will calculate or continuously monitor and record the unit heat input and the following operating parameters on an hourly basis.
  a. Furnace outlet temperature, including SCR inlet temperature, °F
  b. Secondary Air Flow
  c. Primary Air Flow
  d. Fuel Flow Rate
  e. Residence Time (by calculation only) [s. 285.65(10), Wis. Stats.]
(6) During the initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.A.4.c.(5) to establish operational ranges for incorporation into the operation permit. [s. 285.65(10), Wis. Stats.]
(7) The permittee shall install, calibrate, maintain and operate instrumentation to monitor the parameters identified by condition I.A.4.c.(5)a. - d. [s. 285.65(3) and (10), Wis. Stats.]

2 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler

The following emission limits apply to each SCPC boiler. [CONTINUED]

Pollutant: 4. Oxides of Nitrogen [CONTINUED]

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) The permittee shall comply with the NSPS compliance determination procedures and methods per s. NR 440.20(6), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
<td>(8) The permittee shall comply with the NSPS reporting requirements per s. NR 440.20(9), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(9) The permittee shall comply with the general and specific monitoring requirements under s. NR 440.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 440.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(9) The permittee shall comply with the general and specific monitoring requirements under s. NR 440.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 440.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(10) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(10) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(11) The permittee shall comply with all the requirements for monitoring, installation, certification, data accounting, compliance dates and reporting data prior to initial certification as required under s. NR 428.07(1)(b), Wis. Adm. Code, s. NR 428.07(2)(b)2, Wis. Adm. Code, s. NR 428.07(3), Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]</td>
<td>(12) The permittee shall monitor NOx and heat input per s. NR 428.08(1)(a), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(13) The permittee shall submit quarterly reports per s. NR 428.09(1), (3) AND (4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(9), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(14) The permittee shall keep appropriate records to show that the boiler is equipped with low NOx burners. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

Note 1: Startup period begins with the firing of fuel and end when the temperature of the flue gas entering selective catalytic reduction (SCR) system exceeds 650 degrees F. The shut down period begins when the temperature of the flue gas entering SCR system temperature drops below 650 degrees F, and shall end with the cessation of fuel firing. Steady state operation is defined as any hour in which no mills are started or stopped or no stabilization fuel is used in the boiler.

Note 2: The boiler is subject to NSPS requirements under s. NR 440.20(5)(a)1., Wis. Adm. Code for nitrogen oxides. The NSPS limit is 0.50 pound per million Btu. The NSPS emission limits for nitrogen oxides apply at all times except during periods of startup, shut down or malfunction. The BACT limit for nitrogen oxides under I.A.4.a.(1), is more restrictive then the nitrogen oxides emission limits under NSPS, thus the boiler is expected to meet the emission limit for nitrogen oxides under NSPS.

Note 3: The boiler is subject to emission limits for nitrogen oxides under s. NR 428.04(2)(a)1.a., Wis. Adm. Code and is 0.15 pounds per million Btu of heat input on a 30-day rolling average basis. The BACT limit for nitrogen oxides is more restrictive then the nitrogen oxides emissions limit established under s. NR 428.04, Wis. Adm. Code, thus the boiler is expected to meet the nitrogen oxides emission limits under s. NR 428.04, Wis. Adm. Code.
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 5. Carbon Monoxide

**a. Limitations:**

1. 0.12 pound per million Btu heat input during steady state operation, excluding periods of startup, shut down and averaged over any consecutive 24-hour period. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7), Wis. Stats.] See Note 1; 
2. 742 pounds per hour excluding periods of startup and shut down, averaged over any consecutive 24-hour period. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7), Wis. Stats.];
3. 2,400 pounds per hour during any one hour period. [s. 285.65(3), Wis. Stats.] See Note 2;
4. 3,250 tons in any 12 consecutive months for all periods, including startup and shut down. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7), Wis. Stats.] See Note 3

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.3 [s. NR 439.07, Wis. Adm. Code]
2. Carbon Monoxide Emissions shall be controlled using low NOx burners and good combustion practices to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
3. The permittee shall demonstrate compliance with the carbon monoxide emission limits as follows:
   a. Daily average shall be determined by calculating the arithmetic average of all applicable hourly emission rates for a calendar day.
   b. The hourly emission rate shall be calculated by combining the CO concentration and diluent concentration (in % O2 or % CO2) measurement consistent with the procedures specified in 40 CFR Part 75 Appendix F. The conversion factor, (K), shall be 0.7266 x 10E-7 lb CO/ft3 – ppm.
   c. The annual emission limit in I.A.5.a.(4) shall be calculated using and totaling the hourly calculated emission rate. [s. 285.65(3), Wis. Stats.]
4. The permittee shall maintain the ranges of the parameters identified in condition I.A.5.c.(3)a.-d., to meet good combustion practices. [s. 285.65(3), Wis. Stats.]
5. The permittee shall perform the compliance emission tests required under condition I.A.5.b.(1) every 60 months within 60 days from the date of the last stack test as long as the permit remains valid. [s. NR 439.075(3)(b) Wis. Adm. Code]
6. The permittee shall keep track of the startup and shut down time by monitoring the temperature of the flue gas entering the SCR. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, US EPA Method 10, or an alternate method approved in writing by the Department shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(4), Wis. Adm. Code]
2. The permittee shall install and operate continuous emissions monitoring systems (CEMs) for CO and oxygen or CO2 within 60 days after initial start up of the boiler. The CEMs shall be calibrated within 90 days after initial start up of the boiler. Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 60 Appendix B, and s. NR 439.06(4), Wis. Adm. Code requirements. [s. 285.65(3), Wis. Stats., s. NR 439.06, Wis. Adm. Code]
3. During operation, the facility will calculate or continuously monitor and record the unit heat input and the following operating parameters on an hourly basis.
   a. Furnace outlet temperature, °F
   b. Secondary Air Flow
   c. Primary Air Flow
   d. Fuel Flow Rate
   e. Residence Time (by calculation only)
      [s. 285.65(10), Wis. Stats.]
4. During the initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.A.5.c.(3) to establish operational ranges for incorporation into the operation permit. [s. 285.65(10), Wis. Stats.]
5. The permittee shall install, calibrate, maintain and operate instrumentation to monitor the parameters identified by condition I.A.5.c.(3) to establish operational ranges for incorporation into the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
6. Continuous emission monitoring methods and procedures shall comply with the requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.09, Wis. Adm. Code]
7. The permittee shall keep appropriate records to show that the boiler is equipped with low NOx burners. [s. 285.65(3), Wis. Stats.]

---

3 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each SCPC boiler.

### Pollutant: Carbon Monoxide

#### b. Compliance Demonstration:

- b. The permittee shall keep records to show that they did not exceed the emission limit in I.A.5.a.(2), (3) and (4) and condition I.A.5.b.(3).

- b. The permittee shall monitor the temperature of the flue gas entering the SCR and keep records of the flue gas temperature entering the SCR to show compliance with Note 1. [s. 285.65(3), Wis. Stats.]

**Note 1:** Startup period begins with the firing of fuel and end when the temperature of the flue gas entering selective catalytic reduction (SCR) system exceeds 650 degrees F. The shut down period begins when the temperature of the flue gas entering SCR system temperature drops below 650 degrees F, and shall end with the cessation of fuel firing. Steady state operation is defined as any hour in which no mills are started or stopped or no stabilization fuel is used in the boiler.

**Note 2:** This hourly emission limit is established to protect the ambient air quality standards.

**Note 3:** This limit is based on a BACT limit, 0.12 pound per million Btu heat input x heat input of the boiler, 6,180 mmBtu/hr x 8,760 hours/year operation x ton/2000 lbs.
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 6. Volatile Organic Compounds (VOC)

**(a) Limitations:**
1. 0.0035 pound per million Btu heat input during steady state operation excluding periods of startup and shut down averaged over any consecutive 24-hour period. (LAER) [s. NR 408.04, Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 1;
2. 21.6 pounds per hour excluding periods of startup and shut down, averaged over any consecutive 24-hour period. (LAER) [s. NR 408.04, Wis. Adm. Code, s. 285.65(7), Wis. Stats.];
3. 95 tons in any 12 consecutive months for all periods, including startup and shut down. (LAER) [s. NR 408.04, Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 2

**(b) Compliance Demonstration:**
1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.4 [s. NR 439.07, Wis. Adm. Code]
2. VOC Emissions shall be controlled using low NOx burners and good combustion practices to meet LAER limits. [s. NR 419.03, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
3. The permittee shall maintain the ranges of the parameters identified in condition I.A.6.c.(2)a.-d., to meet good combustion practices (LAER). [s. 285.65(3), Wis. Stats.]
4. The permittee shall demonstrate compliance with the volatile organic compound emission limit contained in I.A.6.a. as follows:
   (a) VOC emissions shall be calculated based on each 24-hour calendar period.
   (b) The permittee shall calculate an hourly average emission rate based on measured data using CO CEMs required in I.A.5.b. (4) by combining the CO concentration and diluent concentration (in %O2 or % CO2) measurement, consistent with the procedures specified in 40 CFR Part 75 Appendix F, in the following equation:
   
   VOC actual = VOC limit X (CO actual/CO limit)
   [s. 285.65(3), Wis. Stats.]
5. The permittee shall provide the following information to the Department for approval at least 4 months prior to the initial operation:
   (a) Compliance demonstration method that will be used and the records that will be kept to comply with the emission limit in I.A.6.a.(2), and (3). The Department will use this information to write the operation permit. [s. 285.65(3), Wis. Stats.]
6. The permittee shall keep track of the startup and shut down time by monitoring the temperature of the flue gas entering the SCR. [s. 285.65(3), Wis. Stats.]

**(c) Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for VOC Emissions: Whenever compliance emission testing is required, US EPA Method 25A and/or 18 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(3), Wis. Adm. Code]
2. During operation, the facility will calculate or continuously monitor and record the unit heat input and the following operating parameters on an hourly basis.
   a. Furnace outlet temperature, °F
   b. Secondary Air Flow
   c. Primary Air Flow
   d. Fuel Flow Rate
   e. Residence Time (by calculation only)
   [s. 285.65(10), Wis. Stats.]
3. During the initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.A.6.c.(2) to establish operational ranges for incorporation into the operation permit. [s. 285.65(10), Wis. Stats.]
4. The permittee shall install, calibrate, maintain and operate instrumentation to monitor the parameters identified by condition I.A.6.c.(2)a.-d. [s. 285.65(3) and (10), Wis. Stats.]
5. The permittee shall keep appropriate records to show that the boiler is equipped with low NOx burners. [s. 285.65(3), Wis. Stats.]
6. The permittee shall monitor the temperature of the flue gas entering the SCR and keep records of the flue gas temperature entering the SCR to show compliance with Note 1. [s. 285.65(3), Wis. Stats.]

---

**Note 1:** The LAER limit of 0.0035 pound per million Btu heat input equates to 21.6 pounds in any hour at maximum output levels. Startup period begins with the firing of fuel and end when the temperature of the flue gas entering selective catalytic reduction (SCR) system exceeds 650 degrees F. The shut down period begins when the temperature of the flue gas entering SCR system temperature drops below 650 degrees F, and shall end with the cessation of fuel firing. Steady state operation is defined as any hour in which no mills are started or stopped or no stabilization fuel is used in the boiler.

**Note 2:** This limit is based on a LAER limit, 0.0035 pound per million Btu heat input x heat input of the boiler, 6,180 mmBtu/hr x 8,760 hours/year operation x ton/2000 lbs.

---

4 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

#### Pollutant: 7. Lead Emissions

##### a. Limitations: 7.9 pound per trillion Btu Heat Input. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7), Wis. Stats]

##### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.5 [s. NR 439.07, Wis. Adm. Code]

2. Lead emissions shall be controlled using a fabric filter baghouse system to meet the BACT limit. [ s. 285.65(3), Wis. Stats.]

3. The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10 and s. NR 407(4)(a)1., Wis. Adm. Code]

4. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

5. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.A.7.b.(4). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

6. The permittee shall perform the compliance emission tests required under condition I.A.7.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

##### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, US EPA Method 12 or Method 29 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall record the pressure drop across the fabric filter baghouse system at the beginning of each operating shift. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

4. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results.  [s. NR 439.04(1)(d), Wis. Adm. Code]

5. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

5 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

Pollutant: 8. Mercury Emissions

a. Limitations: 1.12 pound per trillion Btu Heat Input (BACT, MACT) [s. NR 408.04, Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 1

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]

(2) Mercury emissions shall be controlled using a fabric filter baghouse system coupled with the use of a FGDs flue gas desulfurization system and SCR to meet the BACT limit. [s. 285.65(3), Wis. Stats.]

(3) Compliance demonstration identified earlier in this permit for the baghouse system, section I.A.1, and the FGD flue gas desulfurization system, section I.A.3, and the SCR system, section I.A.4, shall be used as compliance demonstration techniques for mercury emissions as well. [s. 285.65(3), Wis. Stats.]

(4) The permittee shall perform 4 stack tests within 18 months of the initial operation and then perform biannual stack test, the first of which shall be performed at the beginning of the initial operation period and every 6 months until the initial operation period has been completed. (b) The permittee shall perform the compliance emission tests required under condition I.A.8.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

(5) (a) The permittee shall determine mercury emission through coal sampling and analysis. The permittee shall monitor monthly average mercury content and higher heating value in the coal. (b) The data obtained from the monthly coal sampling and analysis shall be correlated with the results of the latest emission compliance test for the purpose of calculating mercury emission rate. [s. NR 405.08, Wis. Adm. Code]

(6) The permittee shall submit the results of the compliance testing to the Department and the Department will review the test results and adjust the emissions limit to more accurate reduction levels for mercury when the operation permit is issued. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Mercury Emissions: Whenever compliance emission testing is required, US EPA Method 29 or an alternative method approved in writing by the department shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

(2) The permittee shall record the pressure drop across the fabric filter baghouse system at the beginning of each operating shift. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

Note 1: The BACT emission limit for Mercury is based on uncontrolled mercury emissions of 11.2 pounds per trillion Btu and an control efficiency of 90%. The permittee shall achieve process optimization during the initial operation and conduct stack testing for mercury emissions to determine the mercury reduction that is achieved through the use of fabric filter, Wet FGD and SCR system. The Department will use the testing information to adjust the emissions limit to more accurate reduction levels for mercury when the operation permit is issued.

---

6 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

### Pollutant: 9. Emissions of Fluorides

**a. Limitations:** 0.00088 pound per million Btu heat input. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7) Wis. Stats.]

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.7 [s. NR 439.07, Wis. Adm. Code]

2. Emissions of fluorides shall be controlled by a fabric filter baghouse system and a FGD system. [s. NR 406.10, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

3. Compliance demonstration identified earlier in this permit for fabric filter baghouse system and the FGD system, section I.A.3, I.A.1. shall be used as compliance demonstration techniques for fluoride emissions as well. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Emissions of Fluorides: Whenever compliance emission testing is required, US EPA Method 13B shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

### Pollutant: 10. Visible Emissions

**a. Limitations:** 20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code, s. NR 440.20(3)(b), Wis. Adm. Code] See Note 1

**b. Compliance Demonstration:**

1. Opacity shall be controlled using a fabric filter baghouse system. [s. 285.65(3), Wis. Stats.]

2. The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall install, calibrate, maintain and operate a continuous monitoring system, and record the output of the system, for measuring the opacity of emissions discharged to the atmosphere. [s. NR 440.20(7)(a), Wis. Adm. Code, s. 285.65(10), Wis. Stats.]

3. Continuous opacity monitoring methods and procedures shall comply with the requirements of s. NR 440.20(7)(a), Wis. Adm. Code and s. NR 439.09, Wis. Adm. Code. [s. NR 439.09, Wis. Adm. Code; s. 285.65(3), Wis. Stats.]

4. The continuous opacity monitor (COM) may be located after the baghouse and before the WFGD where condensed water vapor is not present, because the SCPC boilers will utilize wet flue gas desulfurization systems which operate at conditions that will have condensed water vapor present in the flue gas in the stack. [s. 285.65(3), Wis. Stats.]

Note 1: No owner or operator may cause to be discharged into the atmosphere any gases which exhibit greater than 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity per s. NR 440.20(3)(b), Wis. Adm. Code.

---

7 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
## A. S18, B18 – Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

### Pollutant: 11. Beryllium

#### a. Limitations:
0.35 pound per trillion Btu heat input. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65 (7) Wis. Stats.]

#### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.8 [s. NR 439.07, Wis. Adm. Code]

2. Emissions of beryllium shall be controlled by a fabric filter baghouse system and a FGD System to meet the BACT limit. [s. NR 406.10, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

3. Compliance demonstration identified earlier in this permit for fabric filter baghouse system and the FGD system, section I.A.3, I.A.1. shall be used as compliance demonstration techniques for beryllium emissions as well. [s. 285.65(3), Wis. Stats.]

4. The permittee shall perform the compliance emission tests required under condition I.A.11.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

5. The permittee shall monitor beryllium emissions through coal sampling and analysis. The permittee shall monitor monthly average beryllium content and higher heating value in the coal. (b) The data obtained from the monthly coal sampling and analysis shall be correlated with the results of the latest emission compliance test for the purpose of calculating beryllium emission rate. [s. NR 405.08, Wis. Adm. Code]. [s. NR 405.08, Wis. Adm. Code]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Emissions of Beryllium: Whenever compliance emission testing is required, US EPA Method 29 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

2. The permittee shall record the pressure drop across the fabric filter baghouse system at the beginning of each operating shift. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

8 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### Pollutant: Hazardous air pollutants

#### a. Limitations:

- The permittee shall use fabric filter baghouse and comply with the PM/PM10 limits in I.A.1.a to meet case by case MACT for inorganic solid HAPs.
- The permittee shall use a wet flue gas desulfurization system (FGD) and comply with the emission limitation of condition I.A.3.a.(1) to meet case by case MACT limits for inorganic acid HAPs.
- The permittee shall comply with and meet the VOC emission limits to comply with case by case MACT for organic HAPs.

#### b. Compliance Demonstration:

1. Inorganic HAPs emission shall be controlled using a fabric filter baghouse system. [s. 285.65(3), Wis. Stats.]
2. The compliance demonstration method identified in section I.A.1.b.(6), shall be used as compliance demonstration techniques for inorganic HAPs emission limitations in I.A.12.a.(1). [s. 285.65(3), Wis. Stats.]
3. Inorganic acid HAPs emission shall be controlled using a wet flue gas desulfurization system (FGD) [s. 285.65(3), Wis. Stats.]
4. The compliance demonstration method identified in section I.A.3.b.(5), shall be used as compliance demonstration techniques for inorganic acid HAPs emission limitations in I.A.12.a.(2). [s. 285.65(3), Wis. Stats.]
5. Organic HAPs emission shall be controlled using good combustion practices. [s. 285.65(3), Wis. Stats.]
6. The compliance demonstration method identified in section I.A.6.b.(2), (3), and (4) shall be used as compliance demonstration techniques for organic HAPs emission limitations in I.A.12.a.(3). [s. 285.65(3), Wis. Stats.]
7. The amount of ash fired in the SCPC boilers may not exceed 5% by weight averaged over any consecutive 30-day period. [s. 285.65(3), Wis. Stats.]
8. The permittee shall analyze the ash fired as fuel at least once a year and any time a different coal is used to ensure the fly ash and bottom ash meet the definition of coal and thus the use of this ash is exempt from the requirements of ch. NR 445, Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs: Whenever compliance testing is required, a compliance test protocol approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall shall keep appropriate records to demonstrate compliance with permit conditions I.A.12.b.(7) and (8). [s. 285.65(3), Wis. Stats.]
### A.S18, B18– Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 13 Ammonia Emissions

<table>
<thead>
<tr>
<th><strong>a. Limitations:</strong></th>
<th>(1) 5 ppm and 20 pounds per hour [s. NR 445.04(1), Wis. Adm. Code]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
<td>(1) The permittee shall demonstrate compliance with applicable ammonia hourly emission limit by performing a stack test using USEPA conditional test Method 027, within 180 days after initial start up of the boiler [s. NR 445.04(1), Wis. Adm. Code].</td>
</tr>
<tr>
<td></td>
<td>(a) Compliance emission tests shall be conducted at 100% load operation.</td>
</tr>
<tr>
<td></td>
<td>(b) If operation at the 100% load is not feasible, the source shall operate at a capacity level that is approved by the Department in writing. [s. NR 439.075(3), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) The permittee shall perform the compliance emission tests required under condition I.A.13.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
<td>(1) Reference Test Method for Ammonia: Whenever compliance testing for ammonia is required, USEPA Method 027, or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

---

9 These emissions do not result from combustion. Aqueous ammonia is used as the reagent for the SCR. Ammonia that does not react is exhausted out of the stack.

10 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
A. S18, B18– Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutant:** 14. Sulfuric Acid Mist

**a. Limitations:** 0.010 pound per million Btu heat input, based upon a 24-hour average. (BACT) [s. NR 405.08(2), Wis. Adm. Code]

**b. Compliance Demonstration:**

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [11] [s. NR 439.07, Wis. Adm. Code]

(2) Sulfuric acid mist emissions shall be controlled by a FGD system and wet electrostatic precipitator system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

(3) The boiler may only be fired on coal and/or ash fuel blend, except for periods of start-up and load stabilization when natural gas or fuel oil may also be utilized as a fuel. [s. NR 405.08(2), Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(4) The permittee shall perform the compliance emission tests required under condition I.A.14.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. NR 439.075(3)(b) Wis. Adm. Code]

(5) The absorber recirculation (AR) slurry flow rate of water to the FGD system shall be periodically monitored and maintained within the range specified under condition I.A.14.c.(2). [s. 285.65(3), Wis. Stats.]

(6) The sulfur content of fuel oil to be used during periods of start-up and load stabilization may not exceed 0.003% by weight. [s. 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(7) During the initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.A.14.c.(5) to establish operational ranges for incorporation into the operation permit. [s. 285.65(10), Wis. Stats.]

(8) The permittee shall maintain the ranges of the parameters identified in condition I.A.14.c.(5)a.-d., to meet good combustion practices. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

(1) Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

(2) The permittee shall provide to the department, at least 4 months prior to the expiration of the construction permit, information on the operational water flow rate to the FGD system to be used for monitoring the flow rate of water to the FGD system, as required under condition I.A.14.b.(7). [s. 285.65(10), Wis. Stats.]

(3) Compliance with the fuel oil sulfur requirements of I.A.14.b.(6) shall be determined using periodic sampling and analysis using methods and procedures specified under condition I.A.13.c.(4). [s. NR 439.06(2)(c), Wis. Adm. Code]


(5) During operation, the facility will calculate or continuously monitor and record the unit heat input and the following operating parameters on an hourly basis.

a. Furnace outlet temperature, °F
b. Secondary Air Flow
c. Primary Air Flow
d. Fuel Flow Rate
e. Residence Time (by calculation only) [s. 285.65(10), Wis. Stats.]

(6) The permittee shall install, calibrate, maintain and operate instrumentation to monitor the parameters identified by condition I.A.14.c.(5)a.-d. [s. 285.65(3) and (10), Wis. Stats.]

---

If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### A. S18, B18– Super Critical Pulverized Coal (SCPC) Boiler 1; S19, B19 – Super Critical Pulverized Coal (SCPC) Boiler 2

The following emission limits apply to each SCPC boiler.

**Pollutants:** 15. Hydrogen Chloride

**a. Limitations:** 16.2 pounds per hour, based upon a 24-hour average (MACT), regulated under sec. 112 of the Clean Air Act. [s. 285.65(3), Wis. Stats.]

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]

2. Hydrogen Chloride emissions shall be controlled by the use of wet flue gas desulfurization (FGDS) Systems to meet the MACT limits. [s. NR 405.08(2), Wis. Adm. Code]

3. The boiler may only be fired on coal and/or ash fuel blend, except for periods of start-up and load stabilization when natural gas or fuel oil may also be utilized as a fuel. [s. NR 405.08(2), 406.10, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

4. The permittee shall perform the compliance emission tests required under condition I.A.15.b.(1) every 60 months from the date of the last stack test as long as the permit remains valid. [s. NR 439.075(3)(b) Wis. Adm. Code]

5. The absorber recirculation (AR) slurry flow rate to the FGD system shall be periodically monitored and maintained within the range specified under condition I.A.15.c.(2). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Hydrogen Chloride Emissions: Whenever compliance emission testing is required, US EPA Method 26A shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

2. The permittee shall provide to the department, at least 4 months prior to the expiration of the construction permit, information on the operational absorber recirculation (AR) slurry flow rate to the FGD system to be used for monitoring the absorber recirculation (AR) slurry flow rate to the FGD system, as required under condition I.A.15.b.(3), and shall incorporate this information into the Malfunction Prevention and Abatement Plan. [s. 285.65(10), Wis. Stats.]

3. Instrumentation to monitor the absorber recirculation (AR) slurry flow rate to the wet flue gas desulfurization (FGD) system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]
### B. S20, B20 – SCPC Auxiliary Boiler

#### Pollutant: Particulate Matter Emissions

**a. Limitations:** (1) The emissions may not exceed 0.007 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.05 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation when firing distillate fuel oil.12 [s. NR 439.07, Wis. Adm. Code]
2. The permittee shall determine the hourly emissions using fuel consumption records and emissions factor determined by stack testing. [s. 285.65(3), Wis. Stats.]
3. Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
   - (a) The stack height shall be at least 280.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
   - (b) The stack inside diameter at the outlet may not exceed 5.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
4. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
5. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
6. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.1.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60, Appendix A, Reference Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]
2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]
3. The permittee shall keep records on the heat input used as required in condition I.B.1.b.(6). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
4. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
5. The permittee shall record information on the maintenance required in condition I.B.1.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

---

**Note 1:** The boiler is subject to NSPS requirements under s. NR 440.205, Wis. Adm. Code for particulate matter. The only New Source Performance Standards (NSPS) standard that will be applicable to the boiler for PM is in the form of an opacity standard when fuel oil is fired per 40 CFR Part 60.43b(f) and s. NR 440.205(4) (f), Wis. Adm. Code.

---

12 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### B. S20, B20 – SCPC Auxiliary Boiler

**Pollutant:** 2. Particulate Matter Emissions less than 10 microns (PM$_{10}$)

**Limitations:** (1) The emissions may not exceed 0.007 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.05 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.13 [s. NR 439.07, Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and emissions factor determined by stack testing. [s. 285.65(3), Wis. Stats.]</td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td>(3) The permittee shall keep records on the heat input used as required in condition I.B.2.b.(6). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(a) The stack height shall be at least 280 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(4) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(b) The stack inside diameter at the outlet may not exceed 5.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(5) The permittee shall record information on the maintenance required in condition I.B.2.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall fire natural gas and/or fuel having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(5) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(6) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.2.a. (4). [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

13 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
Pollutant: 3. Sulfur Dioxide

**a. Limitations:**
1. The emissions may not exceed 0.0024 pound per million Btu when firing natural gas. (BACT);
2. The emissions may not exceed 0.0032 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
3. The use of good combustion practices. (BACT);
4. The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months.

[b. Compliance Demonstration:]

1. The permittee shall determine the hourly emissions using fuel consumption records, fuel sulfur content and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

[c. Test Methods, Recordkeeping, and Monitoring:]

1. Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A or 6C shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(2), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.3.b.(8). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.B.3.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

Note 1: The sulfur dioxide New Source Performance Standard (NSPS) in Subpart Db and s. NR 440.205(3), Wis. Adm. Code will be applicable to the boiler only when fuel oil is fired. Based on vendor specification for fuel oil and the proposed BACT limits, the sulfur percentage of the fuel will not exceed 0.05% by weight. Thus it meets the definition for “very low sulfur fuel oil” given in 40 CFR 60.41 and s. NR 440.205(2)(zj), Wis. Adm. Code. Affected sources combusting only very low sulfur fuel oil are not subject to percent reduction requirements required under 40 CFR 60.42(a) per s. NR 440.205(3)(j), Wis. Adm. Code. Also, facilities that combust very low sulfur fuel oil are not required to conduct performance testing or install and operate continuous monitors for sulfur dioxide and if fuel receipts are maintained.
B. S20, B20 – SCPC Auxiliary Boiler

Pollutant: 3. Sulfur Dioxide (continued)

b. Compliance Demonstration:

(4) A representative sample shall be taken from each fuel lot of fuel oil received. The sample shall be analyzed by the permittee for the sulfur content by weight using procedures outline in s. NR 439.08(2), Wis. Adm. Code and the analysis shall be retained by the permittee for a period of at least five years. [s. 285.65(3), Wis. Stats.]

(5) The Department will accept, in lieu of an analysis on each fuel lot under (4) above, an analysis of a representative sample of the fuel lot of distillate fuel oil from which the fuel lot was taken. [s. 285.65(3), Wis. Stats.]

(6) The permittee shall retain copies of its distillate fuel oil supplier’s fuel sulfur and heat content analyses at the facility for each fuel lot of distillate fuel oil received pursuant to 40 CFR 60.334 for a period of five years. [s. NR 439.04(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(7) The permittee shall further obtain certification from the fuel supplier that the applicable methods in s. NR 439.08(2), Wis. Adm. Code, were followed, if applicable, by the supplier in the preparation of said sulfur and heat content analyses. The fuel lot's quantity of fuel oil shall be included with the copies of these analyses. [s. 285.65(3), Wis. Stats.]

(8) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.3.a. (4). [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:


(6) The permittee shall obtain and maintain fuel receipts from the fuel supplier which certify that the fuel oil meets the definition of distillate oil as defined in s. NR 440.205(2)(h), Wis. Adm. Code, if the permitteecombust very low sulfur fuel oil as defined under s. NR 440.205(2)(zj), Wis. Adm. Code. A copy of the requirements attached with the permit. [s. NR 440.205(3)(i)2., Wis. Adm. Code, s. 285.65(7), Wis. Stats.]

(7) The permittee shall submit quarterly reports to the Department certifying that only very low sulfur fuel oil meeting the definition was combusted in the affected facility during the preceding quarter. [s. 285.65(7), Wis. Stats., s. NR 440.205(10)(r), Wis. Adm. Code.]
B. S20, B20 – SCPC Auxiliary Boiler

**Pollutant:** 4. Oxides of Nitrogen

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The emissions may not exceed 0.036 pound per million Btu when firing natural gas based on a 30-day rolling average. (BACT); (2) The emissions may not exceed 0.09 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight oil based on a 30-day rolling average. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. NR 428.04(2)(a)2. and 3., s. NR 428.04(2)(a)2. and 3., s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption record and vendors or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60, US EPA Method 7 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(2) The permittee shall keep records on the heat input used as required in condition I.B.4.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.4.a. (4). [s. 285.65(3), Wis. Stats.]</td>
<td>(4) The permittee shall record information on the maintenance required in condition I.B.4.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(5) The permittee shall determine compliance with the emission limits in I.B.4.a.(2) by conducting performance test as required under s. NR 440.08, Wis. Adm. Code using one the continuous systems for monitoring nitrogen oxides under s. NR 440.205(9)(g), Wis. Adm. Code as follows: (a) Comply with the provisions of s. NR 440.205(9)(b), (c), (d), (e) 2., (e) 3., and (f), or (b) Monitor steam generating unit operating conditions and predict nitrogen oxides emission rates as specified in a plan submitted pursuant to s. NR 440.205(10)(c), Wis. Adm. Code. (c) Submit a plan as required under s. NR 440.205(10)(c) to the Department for approval within 360 days of the initial startup of the facility. [s. 285.65(3), Wis. Stats.]</td>
<td>(5) The permittee shall maintain records of the information required under s. NR 440.205(1)(g), Wis. Adm. Code. A copy of the requirements attached with this permit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(6) The permittee shall submit quarterly reports containing the information recorded in (5) above to the Department for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. [s. 285.65(3), Wis. Stats., s. NR 440.205(10)(l), Wis. Adm. Code]</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** The boiler will have high heat release rate and therefore subject to New Source Performance Standards (NSPS) emission limit of 0.20 pound per million Btu on a 30 day rolling average per s. NR 440.205(5)(a)1.b., Wis. Adm. Code for NOx. The proposed BACT emission limit for NOx is more restrictive then the NSPS limit for NOx.

**Note 2:** The boiler is subject to s. NR 428.04(2)(a)2. and 3., Wis. Adm. Code and is 0.05 pounds per million Btu of heat input when firing natural gas and 0.09 pounds per million Btu of heat input when firing fuel oil for NOx. The BACT limit for NOx is more restrictive or equal to the NOx limit established under s. NR 428.04, Wis. Adm. Code, thus the boiler is expected to meet the limits for NOx emission limits under s. NR 428.04, Wis. Adm. Code.
**B. S20, B20 – SCPC Auxiliary Boiler**

**Pollutant:** 4. Oxides of Nitrogen [CONTINUED]

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8) The permittee shall comply with the general and specific monitoring requirements under s. NR 428.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(9) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(10) The permittee shall comply with all the requirements for monitoring, installation, certification, data accounting, compliance dates and reporting data prior to initial certification as required under s. NR 428.07(1)(b), Wis. Adm. Code, s. NR 428.07(2)(b)2, Wis. Adm. Code, s. NR 428.07(3), Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(11) The permittee shall monitor NOx and heat input per s. NR 428.08(1)(c), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(12) The permittee shall submit quarterly reports per s. NR 428.09(1), (3) and (4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(9), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
### B. S20, B20 – SCPC Auxiliary Boiler

#### Pollutant: 5. Carbon Monoxide

**a. Limitations:**
1. The emissions may not exceed 0.075 pound per million Btu when firing natural gas based on a 30-day rolling average. (BACT);
2. The emissions may not exceed 0.075 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight based on a 30-day rolling average. (BACT);
3. The use of good combustion practices. (BACT);
4. The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**

1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 factor or vendor provided emissions factor [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.5.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, US EPA Method 10, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(4), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.5.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.B.5.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### B. S20, B20 – SCPC Auxiliary Boiler

**Pollutant:** 6. Volatile Organic Compounds (VOC)

**a. Limitations:**
1. The emissions may not exceed 0.0060 pound per million Btu when firing natural gas based on a 30-day rolling average (LAER).
2. The emissions may not exceed 0.0050 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight based on a 30-day rolling average (LAER).
3. The use of good combustion practices (LAER).
4. The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 408.04, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**

1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor or vendor provided emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet LAER emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.6.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for VOC Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, US EPA Method 25 or 18, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(3), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.6.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.B.6.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### Pollutant: 7. Lead Emissions

#### a. Limitations:
1. The emissions may not exceed 0.000000024 pound per million Btu when firing natural gas. (BACT)
2. The emissions may not exceed 0.000009 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT)
3. The use of good combustion practices. (BACT)
4. The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.7.a. (4). [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, US EPA Method 12 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.7.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.B.7.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### B. S20, B20 – SCPC Auxiliary Boiler

**Pollutant:** 8. Mercury Emissions

#### a. Limitations:

1. The emissions may not exceed 0.00000026 pound per million Btu when firing natural gas (BACT).
2. The emissions may not exceed 0.000003 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight (BACT).
3. The use of good combustion practices (BACT).
4. The total heat input may not exceed 498,000 mmBtu in any 12 consecutive months, of which no more than 122,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]

2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.8.a. (4). [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Mercury Emissions: Whenever compliance emission testing is required, US EPA Method 29 or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

2. The permittee shall keep records on the heat input used as required in condition I.B.8.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. The permittee shall record information on the maintenance required in condition I.B.8.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
Pollutant: 9. Emissions of Fluorides

a. Limitations: (1) The emissions may not exceed 0.027 pound per million Btu when firing natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (2) The use of good combustion practices. (BACT); (3) The total heat input may not exceed 498,000 mmBtu on a 12-month rolling average, of which no more than 122,500 mmBtu may be from the combustion of fuel oil on a 12-month rolling average. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration:

(1) The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]

(2) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(4) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.9.a. (3). [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Emissions of Fluorides: Whenever compliance emission testing is required, US EPA Method 13B shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]

(2) The permittee shall keep records on the heat input used as required in condition I.B.9.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall record information on the maintenance required in condition I.B.9.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

Pollutant: 10. Visible Emissions

a. Limitations: 20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code, s. NR 440.205(4)(f), Wis. Adm. Code] See Note 1

b. Compliance Demonstration:

(1) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(2) The permittee shall conduct an initial test as required under s. NR 440.08, Wis. Adm. Code using the procedures and reference method in 40 CFR part 60, Appendix A, which is incorporated by reference in s. NR 440.17, Wis. Adm. Code. [s. NR 440.205(7)(d), Wis. Adm. Code]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

(2) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

Note 1: Any gases emitted from the stack when the unit is fired with fuel oil shall not have an opacity greater than 20% (6 minutes average). The exception is one 6-minute period per hour when the opacity not exceeding 27%. The opacity standard does not apply during periods of start up and shut down or malfunction per s. NR 440.025(4)(f), Wis. Adm. Code.
**B. S20, B20 – SCPC Auxiliary Boiler**

**Pollutant:** 11. Hazardous air pollutants (inorganic solid HAPs, inorganic acid HAPs, Organic HAPs) regulated under sec. 112 of the Clean Air Act.

**a. Limitations:**
1. The permittee shall use natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight and comply with the PM/PM10 limits to meet case by case MACT for inorganic solid HAPs.
2. The permittee shall use natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight to comply with the case by case MACT limits for inorganic acid HAPs.
3. The permittee shall comply with and meet the VOC LAER emission limits to comply with case by case MACT for organic HAPs.
4. The total heat input may not exceed 498,000 mmBtu on a 12-month rolling average, of which no more than 122,500 mmBtu may be from the combustion of fuel oil on a 12-month rolling average. [s. 285.65(13), Wis. Stats.]

**b. Compliance Demonstration:**

1. The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or 0.003% by weight low sulfur fuel oil. This condition is established to meet MACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.11.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs: Whenever compliance emission testing is required a method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.11.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.B.11.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### B. S20, B20 – SCPC Auxiliary Boiler

**Pollutant:** 12. Sulfuric Acid Mist

#### a. Limitations:
(1) The emissions may not exceed 0.00024 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.00064 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 498,000 mmBtu on a 12-month rolling average, of which no more than 122,500 mmBtu may be from the combustion of fuel oil on a 12-month rolling average. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

1. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
2. The permittee shall determine the hourly emissions using fuel consumption records, and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
3. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.B.12.a. (4). [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.B.12.b.(3). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall keep records required under condition I.B.3.b.(4) – (7) to demonstrate compliance with the sulfur content in the fuel. [s. NR 439.04(1)(d), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2

The following emission limits apply to each Diesel Generator.

Pollutant: 1. Particulate Matter Emissions

<table>
<thead>
<tr>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The emissions may not exceed 1.94 pounds per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive month period.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices (BACT).; (5) The emissions unit may be operated only during the hours from 9:00 am to 1:00 PM. This condition is established to protect the ambient air quality standards. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
</tbody>
</table>

b. Compliance Demonstration:

| (1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation when firing natural gas and fuel oil.14 [s. NR 439.07, Wis. Adm. Code] |
| (2) The permittee shall determine the hourly emissions using operating parameters and certified test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.] |
| (3) Stack Parameters These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed. |
| (a) The stack height shall be at least 18 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code] |
| (b) The stack inside diameter at the outlet may not exceed 2.12 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code] |
| (4) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code] |
| (5) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.] |

14 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s). |
C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2
The following emission limits apply to each Diesel Generator.

Pollutant: 2. Particulate Matter Emissions less than 10 microns (PM₁₀)

a. Limitations: (1) The emissions may not exceed 1.94 pounds per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) (5) The emissions unit may be operated only during the hours from 9:00 am to 1:00 PM. This condition is established to protect the ambient air quality standards. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.15 [s. NR 439.07, Wis. Adm. Code]

(2) The permittee shall determine the hourly emissions using operating parameters and certified test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.]

(3) Stack Parameters These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

(a) The stack height shall be at least 18 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(b) The stack inside diameter at the outlet may not exceed 2.12 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(4) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(5) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.1.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

(4) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) The permittee shall record information on the maintenance required in condition I.C.1.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

(6) The permittee shall record the start and end times of the diesel generator operation to demonstrate compliance with condition I.C.2.a.(5). [s. 285.65(3), Wis. Stats.]

---

15 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each Diesel Generator.

**Pollutant:** Sulfur Dioxide

**a. Limitations:**
(1) The emissions may not exceed 0.05 pound per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
(1) The permittee shall determine the hourly emissions using fuel consumption records, fuel sulfur content and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
(2) The permittee shall fire fuel oil having a sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
(1) Reference Test Method for Sulfur Dioxide Emissions; Whenever compliance emission testing is required, US EPA Method 6, 6A or 6C shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(2), Wis. Adm. Code]
(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.3.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
(4) The permittee shall record information on the maintenance required in condition I.C.3.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
The following emission limits apply to each Diesel Generator.

### Pollutant: 3. Sulfur Dioxide (continued)

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4) A representative sample shall be taken from each fuel lot of fuel oil received. The sample shall be analyzed by the permittee for the sulfur content by weight using procedures outline in s. NR 439.08(2), Wis. Adm. Code and the analysis shall be retained by the permittee for a period of at least five years. [s. 285.65(3), Wis. Stats.]</td>
<td>(5) The permittee shall keep records required under condition I.C.3.b.(4) – (7). [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(5) The Department will accept, in lieu of an analysis on each fuel lot under (4) above, an analysis of a representative sample of the fuel lot of distillate fuel oil from which the fuel lot was taken. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(6) The permittee shall retain copies of its distillate fuel oil supplier’s fuel sulfur and heat content analyses at the facility for each fuel lot of distillate fuel oil received pursuant to 40 CFR 60.334 for a period of five years. [s. NR 439.04(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(7) The permittee shall further obtain certification from the fuel supplier that the applicable methods in s. NR 439.08(2), Wis. Adm. Code, were followed, if applicable, by the supplier in the preparation of said sulfur and heat content analyses. The fuel lot's quantity of fuel oil shall be included with the copies of these analyses. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
The following emission limits apply to each Diesel Generator.

<table>
<thead>
<tr>
<th>Pollutant: 4. Oxides of Nitrogen (NOx)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> (1) The emissions may not exceed 6.9 g/bhp-hr and 33.4 pounds per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. NR 428.04(2)(h), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong> (1) The permittee shall determine the hourly emissions using operating parameters and certified emission test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.] (2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code] (3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong> (1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60, US EPA Method 7 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code] (2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.4.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.] (3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code] (4) The permittee shall record information on the maintenance required in condition I.C.4.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code] (5) The permittee shall comply with the general and specific monitoring requirements under s. NR 428.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] (6) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] (7) The permittee shall comply with all the requirements for monitoring, installation, certification, data accounting, compliance dates and reporting data prior to initial certification as required under s. NR 428.07(1)(b), Wis. Adm. Code, s. NR 428.07(2)(b)2, Wis. Adm. Code, s. NR 428.07(3), Wis. Adm. Code. [s. 285.65(3), Wis. Stats.] (8) The permittee shall submit quarterly reports per s. NR 428.09(2), (3) and (4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(9), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

Note 1: The diesel generator is subject to s. NR 428.04(2)(h), Wis. Adm. Code and is 6.9 grams per brake horsepower when firing natural gas and firing fuel oil for NOx. The BACT limit for NOx is more restrictive than the NOx limit under s. NR 428.04, Wis. Adm. Code, thus the diesel generator is expected to meet the NOx limits under s. NR 428.04, Wis. Adm. Code.
### C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2

The following emission limits apply to each Diesel Generator.

**Pollutant:** 5. Carbon Monoxide

#### a. Limitations:
- (1) The emissions may not exceed 41.19 pounds per hour. (BACT);
- (2) The hours of operation may not exceed 500 hours in any 12 consecutive months;
- (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
- (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

(1) The permittee shall determine the hourly emissions using operating parameters and certified emission test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.]

(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, US EPA Method 10, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(4), Wis. Adm. Code]

(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.5.a.(2). [s. 285.65(10), Wis. Stats., 285.65(3), Wis. Stats.]

(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall record information on the maintenance required in condition I.C.5.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
The following emission limits apply to each Diesel Generator.

### Pollutant: Volatile Organic Compounds (VOC)

**b. Limitations:**
1. The emissions may not exceed 4.8 pounds per hour. (LAER); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (LAER); (4) The use of good combustion practices. (LAER) [s. NR 408.04, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

### b. Compliance Demonstration:

1. The permittee shall determine the hourly emissions using operating parameters and certified emission test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet LAER emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for VOC Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, US EPA Method 25 or 18, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(3), Wis. Adm. Code]
2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.6.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.C.6.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2

The following emission limits apply to each Diesel Generator.

**Pollutant:** 7. Lead Emissions

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The emissions may not exceed 0.000114 pound per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight.. (BACT); (4) The use of good combustion practices. (BACT)</td>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, US EPA Method 12 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(5), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(2) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.7.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td></td>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4) The permittee shall record information on the maintenance required in condition I.C.7.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
### Pollutant: 8. Mercury Emissions

#### a. Limitations:
1. The emissions may not exceed 0.00000682 pound per hour. (BACT);
2. The hours of operation may not exceed 500 hours in any 12 consecutive months.;
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
4. The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

1. The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]

2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Mercury Emissions: Whenever compliance emission testing is required, US EPA Method 29 or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.8.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. The permittee shall record information on the maintenance required in condition I.C.8.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
C. S62, B62, – Emergency Diesel Generator 1; S63, B63, - Emergency Diesel Generator 2
The following emission limits apply to each Diesel Generator.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Limitations</th>
<th>Compliance Demonstration</th>
<th>Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions of Fluorides</td>
<td>(a) The emissions may not exceed 0.00088 pound per million Btu Heat Input. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Emissions of Fluorides: Whenever compliance emission testing is required, US EPA Method 13B shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]</td>
</tr>
<tr>
<td>Visible Emissions</td>
<td>(a) 20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code]</td>
<td>(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.9.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(b)</td>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(4) The permittee shall record information on the maintenance required in condition I.C.9.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
<td></td>
</tr>
</tbody>
</table>

Pollutant: 1.0. Visual Emissions

<table>
<thead>
<tr>
<th>Limitations</th>
<th>Compliance Demonstration</th>
<th>Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code]</td>
<td>(1) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2
The following emission limits apply to each Diesel Generator.

**Pollutant:** 11. Hazardous air pollutants (inorganic solid HAPs, inorganic acid HAPs, Organic HAPs) regulated under sec. 112 of the Clean Air Act.

**a. Limitations:** (1) The permittee shall use fuel oil having a maximum sulfur content of 0.003% by weight and comply with the PM/PM10 limits to meet case by case MACT for inorganic solid HAPs; (2) The permittee shall use fuel oil having a maximum sulfur content of 0.003% by weight to comply with the case by case MACT limits for inorganic acid HAPs; (3) The permittee shall comply with and meet the VOC emission limits to comply with case by case MACT for organic HAPs and (4) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (5) The use of good combustion practices. (BACT) [s. 285.65 (13), Wis. Stats.]

**b. Compliance Demonstration:**
(1) The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]

(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet MACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the engine generator; and (b) A list of items that will be checked and maintained and their frequency, to ensure that engine generator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
(1) Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs: Whenever compliance emission testing is required method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.C.11.a.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall record information on the maintenance required in condition I.C.11.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
C. S62, P62, – Emergency Diesel Generator 1; S63, P63, - Emergency Diesel Generator 2

The following emission limits apply to each Diesel Generator.

**Pollutant: 12. Sulfuric Acid Mist**

**a. Limitations:**
1. The emissions may not exceed 0.005 pound per hour. (BACT);
2. The hours of operation may not exceed 500 hours in any 12 consecutive months;
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. [s. NR 405.08(2), Wis. Adm. Code; s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
1. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
2. The permittee shall determine the hourly emissions using fuel consumption records, and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall keep an operating log, which records the monthly hours of operation, to demonstrate compliance with condition I.C.12.a.(2). [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
3. The permittee shall retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. 285.65(3), Wis. Stats.]
4. The permittee shall keep records required under condition I.C.3.b.(4) – (7) to demonstrate compliance with the sulfur content in the fuel. [s. NR 439.04(1)(d), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

**Pollutant: 1. Particulate Matter Emissions**

- **a. Limitations:**
  1. The emissions may not exceed 0.21 pound per hour. (BACT)
  2. The hours of operation may not exceed 500 hours in any 12 consecutive month period.
  3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT)
  4. The use of good combustion practices. (BACT)
  5. The emissions unit may be operated only during the hours from 9:00 am to 1:00 PM. This condition is established to protect the ambient air quality standards. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

- **b. Compliance Demonstration:**

  1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.16 [s. NR 439.07, Wis. Adm. Code]

  2. The permittee shall determine the hourly emissions using fuel consumption and vendor provided emission factors. [s. 285.65(3), Wis. Stats.]

  3. **Stack Parameters**

     These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

     a. The height of stack S64 shall be at least 32 feet above ground level and the height of the stack S175 shall be at least 32 feet and the height of stack S176 shall be at least 12.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

     b. The inside diameter at the outlet of the stack S64 may not exceed 0.7 feet and the inside diameter at the outlet of the stack S175 may not exceed 0.7 feet and the inside diameter at the outlet of the stack S176 may not exceed 0.7 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

  4. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

  5. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

- **c. Test Methods, Recordkeeping, and Monitoring:**

  1. **Reference Test Method for Particulate Matter Emissions:**

     Whenever compliance emission testing is required, test procedures in 40 CFR 60 and US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

  2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

  3. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.1.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

  4. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

  5. The permittee shall record information on the maintenance required in condition I.D.1.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

  6. The permittee shall record the start and end times of the diesel generator operation to demonstrate compliance with condition I.D.1.a.(5). [s. 285.65(3), Wis. Stats.]

---

16 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>2. Particulate Matter Emissions less than 10 microns (PM$_{10}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
<td>1. The emissions may not exceed 0.21 pound per hour. (BACT); 2. The hours of operation may not exceed 500 hours in any 12 consecutive months; 3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); 4. The use of good combustion practices. (BACT); 5. The emissions unit may be operated only during the hours from 9:00 am to 1:00 pm. This condition is established to protect the ambient air quality standards. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall determine the hourly emissions using operating parameters and certified test data as required by 40 CFR Part 60. [s. 285.65(3), Wis. Stats.]</td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Stack Parameters These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td>(3) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.2.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(a) The height of stack S64 shall be at least 32 feet above ground level and the height of the stack S175 shall be at least 32 feet and the height of stack S176 shall be at least 12.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(4) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(b) The inside diameter at the outlet of the stack S64 may not exceed 0.7 feet and the inside diameter at the outlet of the stack S175 may not exceed 0.7 feet and the inside diameter at the outlet of the stack S176 may not exceed 0.7 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(5) The permittee shall record information on the maintenance required in condition I.D.2.b.(5). [s. NR 439.04(1)(a)(6), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(6) The permittee shall record the start and end times of the diesel generator operation to demonstrate compliance with condition I.D.2.a.(5). [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(5) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>17 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).</td>
</tr>
</tbody>
</table>
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

**Pollutant:** Sulfur Dioxide

**a. Limitations:**
(1) The emissions may not exceed 0.01 pound per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
(1) The permittee shall determine the hourly emissions using fuel consumption records, fuel sulfur content and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
(1) Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A or 6C shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(2), Wis. Adm. Code]
(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.3.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
(4) The permittee shall record information on the maintenance required in condition I.D.3.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump. [CONTINUED]

<table>
<thead>
<tr>
<th>Pollutant: 3. Sulfur Dioxide (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Compliance Demonstration:</td>
</tr>
<tr>
<td>(4) A representative sample shall be taken from each fuel lot of fuel oil received. The sample shall be analyzed by the permittee for the sulfur content by weight using procedures outline in s. NR 439.08(2), Wis. Adm. Code and the analysis shall be retained by the permittee for a period of at least five years. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(5) The Department will accept, in lieu of an analysis on each fuel lot under (4) above, an analysis of a representative sample of the fuel lot of distillate fuel oil from which the fuel lot was taken. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(6) The permittee shall retain copies of its distillate fuel oil supplier’s fuel sulfur and heat content analyses at the facility for each fuel lot of distillate fuel oil received pursuant to 40 CFR 60.334 for a period of five years. [s. NR 439.04(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(7) The permittee shall further obtain certification from the fuel supplier that the applicable methods in s. NR 439.08(2), Wis. Adm. Code, were followed, if applicable, by the supplier in the preparation of said sulfur and heat content analyses. The fuel lot’s quantity of fuel oil shall be included with the copies of these analyses. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
</tbody>
</table>
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>4. Oxides of Nitrogen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
<td>(1) The emissions may not exceed 14.0 pounds per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and vendor provided emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60, US EPA Method 7 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.4.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The permittee shall record information on the maintenance required in condition I.D.4.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
<td></td>
</tr>
</tbody>
</table>
**D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump**

The following emission limits apply to each fire pump.

**Pollutant:** 5. Carbon Monoxide

**a. Limitations:**
1. The emissions may not exceed 3.36 pounds per hour. (BACT);
2. The hours of operation may not exceed 500 hours in any 12 consecutive months.;
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
4. The use of good combustion practices. (BACT)  
   [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
1. The permittee shall determine the hourly emissions using fuel consumption records and vendor provided emission factors.  
   [s. 285.65(3), Wis. Stats.]

2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit.  
   [s. NR 405.08(2), Wis. Adm. Code]

3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit.  
   [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, US EPA Method 10, or an alternate method approved in writing by the Department shall be used to demonstrate compliance.  
   [s. NR 439.06(4), Wis. Adm. Code]

2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.5.a.(2).  
   [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities.  
   [s. NR 439.04(1)(d), Wis. Adm. Code]

4. The permittee shall record information on the maintenance required in condition I.D.5.b.(3).  
   [s. NR 439.04(1)(a)6, Wis. Adm. Code]
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

**Pollutant:** 6. Volatile Organic Compounds (VOC)

**a. Limitations:**

1. The emissions may not exceed 0.31 pounds per hour. (LAER)
2. The hours of operation may not exceed 500 hours in any 12 consecutive months.
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (LAER)
4. The use of good combustion practices. (LAER)  

**b. Compliance Demonstration:**

1. The permittee shall determine the hourly emissions using fuel consumption records and vendor provided emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet LAER emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. **Reference Test Method for VOC Emissions:** Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, Appendix A, US EPA Method 25 or 18, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]
2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.6.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.D.6.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

<table>
<thead>
<tr>
<th>Pollutant: 7. Lead Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> (1) The emissions may not exceed 0.0000274 pound per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive month period.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>b. Compliance Demonstration:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, US EPA Method 12 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(5), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.7.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall record information on the maintenance required in condition I.D.7.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

**Pollutant:** 8. Mercury Emissions

**a. Limitations:**
1. The emissions may not exceed 0.00000164 pound per hour. (BACT);
2. The hours of operation may not exceed 500 hours in any 12 consecutive months.;
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
4. The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
1. The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. **Reference Test Method for Mercury Emissions:** Whenever compliance emission testing is required, US EPA Method 29 or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.8.a.(2). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.D.8.b.(3). [s. NR 439.04(1)(a)(6), Wis. Adm. Code]
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump
The following emission limits apply to each fire pump.

### Pollutant: 9. Emissions of Fluorides

#### Limitations:
1. The emissions may not exceed 0.00000376 pound per hour. (BACT)
2. The hours of operation may not exceed 500 hours in any 12 consecutive months.
3. The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT)
4. The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats]

#### b. Compliance Demonstration:
1. The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Emissions of Fluorides: Whenever compliance emission testing is required, US EPA Method 13B shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.9.a.(2). [s. 285.65(10), Wis. Stats., 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(a)6, Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.D.9.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

### Pollutant: 10. Visible Emissions

#### a. Limitations:
20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code]

#### b. Compliance Demonstration:
1. The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

#### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]
2. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

<table>
<thead>
<tr>
<th>Pollutant: 11. Hazardous air pollutants (inorganic solid HAPs, inorganic acid HAPs, Organic HAPs) regulated under sec. 112 of the Clean Air Act.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> (1) The permittee shall use fuel oil having a maximum sulfur content of 0.003% sulfur by weight and comply with the PM/PM10 limits to meet case by case MACT for inorganic solid HAPs; (2) The permittee shall use fuel oil having a maximum sulfur content of 0.003% by weight to comply with the case by case MACT limits for inorganic acid HAPs; (3) The permittee shall comply with and meet the VOC emission limits to comply with case by case MACT for organic HAPs and (4) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (5) The use of good combustion practices. (BACT) [s. NR 445.04(3)(a), Wis. Adm. Code]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet MACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fire pump; and (b) A list of items that will be checked and maintained and their frequency, to ensure that fire pump is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs; Whenever compliance emission testing is required a method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall record the monthly hours of operation, to demonstrate compliance with condition I.D.11.a.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall record information on the maintenance required in condition I.D.11.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
D. S64, P64 – Emergency Diesel Driven Fire Pump; S175, P175 – Emergency Boiler Building Driven Fire Booster Pump; S176, P176 – Emergency Crusher Tower Diesel Driven Fire Booster Pump

The following emission limits apply to each fire pump.

<table>
<thead>
<tr>
<th>Pollutant: 12. Sulfuric Acid Mist</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations: (1) The emissions may not exceed 0.001 pound per hour. (BACT); (2) The hours of operation may not exceed 500 hours in any 12 consecutive months.; (3) The use of fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (4) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
<tr>
<td>b. Compliance Demonstration: (1) The permittee shall fire fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code] (2) The permittee shall determine the hourly emissions using fuel consumption records, and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>c. Test Methods, Recordkeeping, and Monitoring: (1) Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code] (2) The permittee shall keep an operating log, which records the monthly hours of operation, to demonstrate compliance with condition I.D.12.a.(2). [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.] (3) The permittee shall retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. 285.65(3), Wis. Stats.] (4) The permittee shall keep records required under condition I.D.3.b.(4) – (7) to demonstrate compliance with the sulfur content in the fuel. [s. NR 439.04(1)(d), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>
### E. S23, P23 – Crusher House Dust Collector No. 1; S24, P24 – Crusher House Dust Collector No. 2

The following emission limits apply to each crusher house duct collector.

#### Pollutant: 1. Particulate Matter Emissions

**a. Limitations:** 0.004 grains per dry standard cubic foot of exhaust gas and 1.307 pounds per hour. (BACT) [s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

#### b. Compliance Demonstration:

(1) Initial compliance emission tests for one of the crusher house dust collector 1 or 2 shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.18 [s. NR 439.07, Wis. Adm. Code]

(2) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   (a) The stack height shall be at least 160 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   (b) The stack inside diameter at the outlet may not exceed 3.73 Feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.E.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

(8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

(1) **Reference Test Method for Particulate Matter Emissions:** Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

18 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
E.  S23, P23 – Crusher House Dust Collector No. 1; S24, P24 – Crusher House Dust Collector No. 2

The following emission limits apply to each crusher house duct collector.

<table>
<thead>
<tr>
<th>Pollutant: 2. Visible Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> 10% opacity. [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 440.42(3)(c), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.E.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

Note 1: The coal handling/storage operations are subject to s. NR 440.42(3)(c), Wis. Adm. Code (New Source Performance Standards, NSPS requirements) for visible emissions. For these operation, s. NR 440.42(3)(c), Wis. Adm. Code prohibits visible emissions of 20 percent opacity or greater for any coal processes and conveying equipment, coal storage system, or coal transfer and loading system. The BACT limit for opacity is more restrictive than NSPS limits for opacity thus the crusher house operation is expected to be in compliance with the NSPS emission limits for opacity.
### F. S27, P27 - Fly Ash Silo Filter Vent 1; S65, P65 – Fly Ash Silo Filter Vent 2

The following emission limits apply to each of the fly ash silo filter vent.

**Pollutant:** 1. Particulate Matter Emissions

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>0.02 grains per dry standard cubic foot of exhaust gas and 0.394 pound per hour. (BACT) [s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
</tbody>
</table>

(1) The permittee shall determine hourly emissions using operating parameters and OEM emission factors. [s. 285.65(3), Wis. Stats.]

(2) **Stack Parameters** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

(a) The stack height shall be at least 120 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(b) The stack inside diameter at the outlet may not exceed 3.4 Feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(3) Particulate matter emissions shall be controlled using a bin vent filter system to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

(4) The bin vent filter system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The permittee shall develop and follow a Malfunction Prevention and Abatement Plan for the bin vent filter system. The plan shall identify the specific measures that will be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific measures could include: filter inspection schedule, filter replacement criteria, etc. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(6) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

(7) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]
### F. S27, P27 - Fly Ash Silo Filter Vent 1; S65, P65 - Fly Ash Silo Filter Vent 2
The following emission limits apply to each of the fly ash silo filter vent.

<table>
<thead>
<tr>
<th>Pollutant: 2. Visible Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> 10% opacity. [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The bin vent filter system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The compliance method in I.F.1.b. shall be used to demonstrate compliance with the visible emission limits. [s. NR 407.09(4)(a)1., Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) <strong>Reference Test Method for Visible Emissions:</strong> Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the bin vent filter system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>G. S28, P28 - Existing Junction House 7/8 Dust Collector</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Pollutant:</strong> 1. Particulate Matter Emissions</td>
</tr>
<tr>
<td><strong>a. Limitations:</strong> 0.01 grains per dry standard cubic foot of exhaust gas and 2.331 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.19 [s. NR 439.07, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
</tr>
<tr>
<td>(a) The stack height shall be at least 175 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(b) The stack inside diameter at the outlet may not exceed 3.1 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(5) The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.G.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

19 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
## G. S28, P28 - Existing Junction House 7/8 Dust Collector

**Pollutant:** 2. Visible Emissions

### a. Limitations:

10% opacity. [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

### b. Compliance Demonstration:

1. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

2. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.G.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

3. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

4. Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]
### H. S47, P47 – Limestone Prep Building Dust Collector

**Pollutant:** 1. Particulate Matter Emissions

**a. Limitations:** 0.004 grains per dry standard cubic foot of exhaust gas and 0.480 pound per hour. (BACT)  
[s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Note 1

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
</table>
| (1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.  
Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used.  
[s. NR 440.688(6)(b), Wis. Adm. Code, s. NR 439.06(1), Wis. Adm. Code] |
| (2) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.  
(a) The stack height shall be at least 60 feet above ground level.  
[s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]  
(b) The stack inside diameter at the outlet may not exceed 2.3 feet.  
[s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code] | (2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters.  
[s. NR 439.04(1)(d), Wis. Adm. Code] |
| (3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits.  
[s. NR 405.08(2), Wis. Adm. Code] | (3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation.  
[s. NR 439.055(2)(b)1., Wis. Adm. Code] |
| (4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation.  
[s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code] | (4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results.  
[s. NR 439.04(1)(d), Wis. Adm. Code] |
| (5) The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period.  
[s. 285.65(3), Wis. Stats.] | (5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly.  
[s. NR 439.055(1)(a), Wis. Adm. Code] |
| (6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.H.1.b.(5).  
[s. NR 407.09(4)(a)1., Wis. Adm. Code] | |
| (7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits.  
[s. 285.65(3), Wis. Stats.] | |
| (8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne.  
[s. 285.65(3), Wis. Stats.] | |

---

Note 1: The limestone prep operation is subject to New Source Performance Standards (NSPS) for particulate matter under s. NR 440.688(3), Wis. Adm. Code and the limit is 0.022 gr/acf. The BACT limit for particulate matter is more restrictive than NSPS limit for particulate matter thus the limestone prep operation is expected to meet the NSPS emission limit for particulate matter.

---

20 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
Pollutant: 2. Visible Emissions

**a. Limitations:** 7% opacity. [s. NR431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. NR 440.688(3)(a), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

2. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.H.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

3. The permittee shall determine compliance with the visible emission limits using EPA Approved Method 9. [s. NR 440.688(6)(b)2., Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]

4. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

5. Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. **Reference Test Method for Visible Emissions:** Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

5. The permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the visible emission limits in I.H.2.a. Including reports of opacity observations made using Method 9. [s. 285.65(3), Wis. Stats.]

**Note 1:** The limestone prep operation is subject to New Source Performance Standards (NSPS) to visible emissions limit under s. NR 440.688(3), Wis. Adm. Code and the limit is 7% opacity.
I S48, P48 - XFr Tower No. 3 And Tripper Room Unit 1 Dust Collector

Pollutant: 1. Particulate Matter Emissions

a. Limitations: 0.004 grains per dry standard cubic foot of exhaust gas and 1.759 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.21 [s. NR 439.07, Wis. Adm. Code]

(2) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

(a) The stack height shall be at least 280 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(b) The stack inside diameter at the outlet may not exceed 4.33 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period. [s. 285.65(3), Wis. Stats.]

(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.I.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

(8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

21 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% opacity</td>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.I.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
### J. S49, P49 - Tripper Room Dust Collector Unit 2

**Pollutant:** 1. Particulate Matter Emissions

#### a. Limitations:
0.004 grains per dry standard cubic foot of exhaust gas and 1.182 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

#### b. Compliance Demonstration:

| (1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.22 [s. NR 439.07, Wis. Adm. Code] |
| (2) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed. |
| (a) The stack height shall be at least 240 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code] |
| (b) The stack inside diameter at the outlet may not exceed 3.6 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code] |
| (3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code] |
| (4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code] |
| (5) The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period. [s. 285.65(3), Wis. Stats.] |
| (6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.J.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code] |
| (7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.] |
| (8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.] |

#### c. Test Methods, Recordkeeping, and Monitoring:

| (1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code] |
| (2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code] |
| (3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code] |
| (4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code] |
| (5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code] |

---

22 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
**J. S49, P49 – Tripper Room Dust Collector Unit 2**

**Pollutant:** 2. Visible Emissions

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.J.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
K. S58, P58 - XFr Tower House #5 Dust Collector

**Pollutant:**  1. Particulate Matter Emissions

**a. Limitations:** 0.004 grains per dry standard cubic foot of exhaust gas and 0.567 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.23 [s. NR 439.07, Wis. Adm. Code]

2. Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
   
   a. The stack height shall be at least 196 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   b. The stack inside diameter at the outlet may not exceed 2.5 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.K.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

8. Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

4. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

5. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

23 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### K. S58, P58 – XFr Tower House #5 Dust Collector

**Pollutant:** Visible Emissions

#### a. Limitations:
- 10% opacity  [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:
1. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]
2. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.K.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]
3. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]
4. Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]
2. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]
3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]
### L. S59A, P59A - IGCC Coal Silos Dust Collector a; S59B, P59B – IGCC Coal Silos Dust Collector b

The following emission limits apply to each IGCC coal silos dust collector.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>1. Particulate Matter Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 1.371 pounds per hour (BACT)</td>
</tr>
</tbody>
</table>

**b. Compliance Demonstration:**

1. Initial compliance emission tests on any one IGCC coal silos dust collector or b shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.24

2. **Stack Parameters**
   - The source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
     - (a) The stack height shall be at least 130 feet above ground level. [s. 285.65(3), Wis. Stats, s. NR 406.10, Wis. Adm. Code]
     - (b) The stack inside diameter at the outlet may not exceed 3.8 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.L.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

8. Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

<table>
<thead>
<tr>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) <strong>Reference Test Method for Particulate Matter Emissions:</strong> Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

24 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### Pollutant: 2. Visible Emissions

**a. Limitations:** 10% opacity  
[s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation.  
[s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

2. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition 1.L.1.b.(5).  
[s. NR 407.09(4)(a)1., Wis. Adm. Code]

3. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits.  
[s. 285.65(3), Wis. Stats.]

4. Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne.  
[s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. **Reference Test Method for Visible Emissions:** Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used.  
[s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation.  
[s. NR 439.055(2)(b)1., Wis. Adm. Code]

3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results.  
[s. NR 439.04(1)(d), Wis. Adm. Code]

4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly.  
[s. NR 439.055(1)(a), Wis. Adm. Code]

---

**Note 1:** The coal handling/storage operations are subject to s. NR 440.42(3)(c), Wis. Adm. Code (New Source Performance Standards, NSPS requirements) visible emissions. For these operation, s. NR 440.42(3)(c), Wis. Adm. Code prohibits visible emissions of 20 percent opacity or greater for any coal processes and conveying equipment, coal storage system, or coal transfer and loading system. The BACT limit for opacity is more restrictive then NSPS limits for opacity thus the coal handling/storage operations is expected to be in compliance with the NSPS visible emission limits.
### M. S66, P66 – XFr Tower No. 4 Dust Collector

**Pollutant:** 1. Particulate Matter Emissions

**Limitations:** 0.004 grains per dry standard cubic foot of exhaust gas and 0.944 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.25 [s. NR 439.07, Wis. Adm. Code]

2. **Stack Parameters.** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   a. The stack height shall be at least 25 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   b. The stack inside diameter at the outlet may not exceed 3.2 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.M.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

8. Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

1. **Reference Test Method for Particulate Matter Emissions:** Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

4. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

5. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

25 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
**M. S66, P66 - Transfer Tower No. 4 Dust Collector**

**Pollutant:** Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations: 10% opacity [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.M.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
### N. S76, P76 - Coal Car Dumper Dust Collector No. 1

**Pollutant:** 1. Particulate Matter Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>b. Compliance Demonstration</th>
<th>c. Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 5.531 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.26 [s. NR 439.07, Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) Stack Parameters These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(a) The stack height shall be at least 60 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the process is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(b) The stack inside diameter at the outlet may not exceed 7.68 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10 and s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5) The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.B.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
</tbody>
</table>

26 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### N. S76, P76 - Coal Car Dumper Dust Collector No. 1

#### Pollutant: 2. Visible Emissions

**a. Limitations:** 10% opacity  [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation.  [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

2. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition l.N.1.b.(5).  [s. NR 407.09(4)(a)1., Wis. Adm. Code]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used.  [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the process is in operation.  [s. NR 439.055(2)(b)1., Wis. Adm. Code]

3. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results.  [s. NR 439.04(1)(d), Wis. Adm. Code]

4. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly.  [s. NR 439.055(1)(a), Wis. Adm. Code]
### Pollutant: Particulate Matter Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>b. Compliance Demonstration</th>
<th>c. Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.024 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(1) The permittee shall utilize a building to control emissions from coal stackout, storage and reclaim operations, a stackout conveyor – with telescopic chute or travelling stacking conveyor with short drop, and coal reclaim system with short chute drop and loading table to minimize emissions and to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 5 and Method 202 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td>(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The permittee shall ensure that theTrained Person designated:</td>
<td>(4) The Trained Person designated by condition I.O.1.b.(3) shall sign and date the records required in I.O.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(a) Has training to evaluate compliance with Wisconsin air quality regulations, or</td>
<td>(5) The permittee shall ensure that records of the Trained Person designated by condition I.O.1.b.(4)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5) The permittee shall determine the hourly emissions using the hourly throughput and AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>Pollutant:</td>
<td>2. Visible Emissions</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>a. Limitations:</td>
<td>10% opacity. (Best Available Control Technology, BACT) [s. NR 431.05, Wis. Adm. Code, s. NR 405.08(2), Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 1</td>
<td></td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
<td></td>
</tr>
<tr>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions.
P. S104, P104 – Gypsum Storage and Handling Operations Building Exhaust Fan No. 1; S105, P105 – Exhaust Fan No. 2; S106, P106 – Exhaust Fan No. 3

The following emission limits apply to each gypsum building exhaust fan.

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>Particulate Matter Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
<td>0.377 pound per hour. (BACT)</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
<td>(1) The permittee shall utilize a building to control emissions from gypsum stackout, storage and reclaim operations, and a reversible shuttle conveyor to distribute gypsum along the pile crest with short drop to minimize emissions and to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(2) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>
| | (4) The permittee shall ensure that the Trained Person designated:  
(a) Has training to evaluate compliance with Wisconsin air quality regulations, or  
(b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or  
(c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.] |
| | (5) The permittee shall determine the hourly emissions using hourly throughput and AP-42 emission factors. [s. 285.65(3), Wis. Stats.] |
| **c. Test Methods, Recordkeeping, and Monitoring:** | (1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 5 and Method 202 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code] |
| | (2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code] |
| | (3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code] |
| | (4) The Trained Person designated by condition I.P.1.b.(3) shall sign and date the records required in I.P.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.] |
| | (5) The permittee shall ensure that records of the Trained Person designated by condition I.P.1.b.(4)’s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.] |
The following emission limits apply to each gypsum building exhaust fan.

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>2. Visible Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations:</td>
<td>10% opacity. (Best Available Control Technology, BACT) [s. NR 431.05, Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
<tr>
<td></td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions.
Q. S109, P109- Fuel Ash Building Exhaust Fan

Pollutant: 1. Particulate Matter Emissions

a. Limitations: 0.240 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

b. Compliance Demonstration:

(1) The permittee shall utilize a building to control emissions from fuel ash stackout, storage, and reclaim operations, stackout drop from telescopic chute and reclaim fuel ash into hopper via front end loader to minimize emissions and to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(2) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]

(3) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]

(4) The permittee shall ensure that the Trained Person designated:
   (a) Has training to evaluate compliance with Wisconsin air quality regulations, or
   (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or
   (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]

(5) The permittee shall determine the hourly emissions using throughput and AP-42 emission factors. [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 5 and Method 202 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]

(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]

(4) The Trained Person designated by condition I.Q.1.b.(3) shall sign and date the records required in I.Q.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]

(5) The permittee shall ensure that records of the Trained Person designated by condition I.Q.1.b.(4) training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]
### Q. S109, P109 – Ash Reburn Building Exhaust Fan

**Pollutant:** 2. Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>b. Compliance Demonstration</th>
<th>c. Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% opacity. (Best Available Control Technology, BACT) [s. NR 431.05, Wis. Adm. Code, s. NR 405.08(2), Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(7), Wis. Stats.] See Note 1</td>
<td></td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

**Note 1:** When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions.
### Pollutant: 1. Particulate Matter Emissions

**a. Limitations:** 0.004 grains per dry standard cubic foot of exhaust gas and 0.350 pound per hour. (BACT) [s. NR 415.06(2), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 90 after the start of operation of the process to show compliance with the emission limitation.27 [s. NR 439.07, Wis. Adm. Code]

2. Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
   
   a. The stack height shall be at least 40 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   b. The stack inside diameter at the outlet may not exceed 0.9 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse system. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation to meet the BACT limits. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.R.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. (a) The fly ash storage facility shall receive fly ash either by bulk tanker truck or fully enclosed pneumatically conveyors. (b) The bulk truck loading be done in a fully enclosed structure. [s. 285.65(3), Wis. Stats.] This condition is established to ensure no fugitive dust is generated by the fly ash storage facility’s operation. Also based on this condition no emissions are expected from the equipment used to transfer material to and from the fly ash storage facility. [s. 285.65(3), Wis. Stats.]

---

27 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### R. S114, P31- Fly Ash Storage Building Exhaust Fan Dust Collector

**Pollutant:** 2. Visible Emissions

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.R.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the process is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
**S. S149, P149 - Gypsum XFr Tower No. 1 Dust Collector.**

**Pollutant:** 1. Particulate Matter Emissions

**a. Limitations:** 0.005 grains per dry standard cubic foot of exhaust gas and 0.504 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.28 [s. NR 439.07, Wis. Adm. Code]

2. **Stack Parameters** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   a. The stack height shall be at least 35 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   b. The stack inside diameter at the outlet may not exceed 2.1 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

3. Particulate matter emissions shall be controlled using a fabric filter baghouse filter system to meet the BACT limit. [s. NR 405.08(2), Wis. Adm. Code]

4. The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

5. The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

6. The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.S.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

7. The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

8. Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. **Reference Test Method for Particulate Matter Emissions:** Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

4. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

5. Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

---

28 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
Pollutant: 2. Visible Emissions

b. Compliance Demonstration:

(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) The compliance method in I.S.1.b. shall be used to demonstrate compliance with the visible emission limits. [s. NR 407.09(4)(a)1., Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]
a. Limitations: 0.005 grains per dry standard cubic foot of exhaust gas and 0.450 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.29 [s. NR 439.07, Wis. Adm. Code]

(2) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

(a) The stack height shall be at least 35 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(b) The stack inside diameter at the outlet may not exceed 1.96 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]

(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(5) The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]

(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.T.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]

(8) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]
**Pollutant:** 2. Visible Emissions

<table>
<thead>
<tr>
<th><strong>Limitations:</strong> 10% opacity [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The compliance method in I.T.1.b. shall be used to demonstrate compliance with the visible emission limits. [s. NR 407.09(4)(a)1., Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(4) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

<p>| <strong>Test Methods, Recordkeeping, and Monitoring:</strong> |
| (1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code] |
| (2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code] |
| (3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code] |
| (4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code] |</p>
<table>
<thead>
<tr>
<th>Pollutant: 1. Particulate Matter Emissions</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> 0.02 grains per dry standard cubic foot of exhaust gas and 0.369 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code; s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack and file separator system parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(1) The permittee shall determine the hourly emissions using operating parameters and OEM emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the filter separator system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) Stack Parameters These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td></td>
</tr>
<tr>
<td>(a) The stack height shall be at least 30 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(b) The stack inside diameter at the outlet may not exceed 1.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) Particulate matter emissions shall be controlled using a filter separator system to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The filter separator system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(5) The permittee shall develop and follow a Malfunction, Prevention and Abatement Plan for the filter separator system. The plan shall identify the specific measures that will be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific measures could include: filter inspection schedule, filter replacement criteria, etc. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
The following emission limits apply to each fly ash silo vacuum exhauster.

**Pollutant:** 2. Visible Emissions

**a. Limitations:** 10% opacity. [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**

1. The filter separator system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a1), Wis. Adm. Code]

2. The compliance method in I.U, 1.b. shall be used to demonstrate compliance with the visible emission limits. [s. NR 407.09(4)(a1), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. **Reference Test Method for Visible Emissions:** Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a1), Wis. Adm. Code]

2. The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the filter separator system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]
### V. S171, P171 - Gypsum Hopper Dust Collector

**Pollutant:** 1. Particulate Matter Emissions

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>0.004 grains per dry standard cubic foot of exhaust gas and 1.80 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code; s. 285.65(3), Wis. Stats]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.30 [s. NR 439.07, Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(a) The stack height shall be at least 75 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(b) The stack inside diameter at the outlet may not exceed 4.4 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Particulate matter emissions shall be controlled using a fabric filter baghouse system to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td>(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(5) The operating pressure drop range across the fabric filter baghouse system shall be determine during the initial testing period. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.V.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(8) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

---

30 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### V. S171, P171- Gypsum Hopper Dust Collector

**Pollutant:** 2. Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>b. Compliance Demonstration</th>
<th>c. Test Methods, Recordkeeping, and Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% opacity [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) The compliance method in I.V, 1.b. shall be used to demonstrate compliance with the visible emission limits. [s. NR 407.09(4)(a)1., Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) Whenever fugitive dust emissions are observed form the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
### W. S172, P172 – Limestone Loading Table Insertable Bin Vent Filter

**Pollutant:** 1. Particulate Matter Emissions

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 0.171 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Note 1</td>
<td>(1) The permittee shall determine hourly emissions using operating parameters and OEM emission factors. [s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 440.688(6)9b), Wis. Adm. Code, s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>Particulate Matter Emissions</td>
<td>(2) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack and bin vent filter parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>a. Limitations:</td>
<td></td>
<td>(3) The permittee shall record the pressure drop across the bin vent filter system every eight hours whenever the process is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 0.171 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Note 1</td>
<td>(a) The stack height shall be at least 25 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the bin vent filter system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>Particulate Matter Emissions</td>
<td>(b) The stack inside diameter at the outlet may not exceed 1.4 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td>(5) Instrumentation to monitor the pressure drop across the bin vent filter system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
<tr>
<td>a. Limitations:</td>
<td>(3) (a) Particulate matter emissions shall be controlled using a bin vent filter system to meet the BACT limits. (b) The limestone loading table will be connected to the limestone unloader and will travel along the dock conveyor. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 0.171 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Note 1</td>
<td>(4) The bin vent filter system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>Particulate Matter Emissions</td>
<td>(5) The operating pressure drop range across the bin vent filter system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>a. Limitations:</td>
<td>(6) The pressure drop across the bin vent filter system shall be maintained within the range identified by condition I.W.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 0.171 pound per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.] See Note 1</td>
<td>(7) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 440.688(6)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** The limestone loading table operation is subject to New Source Performance Standards (NSPS) for particulate matter under s. NR 440.688(3), Wis. Adm. Code and the limit is 0.022 gr/acf. The BACT limit for particulate matter is more restrictive than particulate matter emission limit under NSPS, thus the limestone loading table operation is expected to meet the particulate matter emission limit under NSPS.
W. S172, P172 – Limestone Loading Table Insertable Bin Vent Filter

Pollutant: 2. Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>7% opacity [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. NR 440.688(3)(a), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

b. Compliance Demonstration:

(1) The bin vent filter system shall be in line and shall be operated at all times when the process is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]

(2) The pressure drop across the bin vent filter system shall be maintained within the range identified by condition I.W.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]

(3) The permittee shall determine compliance with the visible emission limits using EPA approved Method 9. [s. NR 440.688(6)(b)2., Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(1) Test Methods, Recordkeeping, and Monitoring:

(2) The permittee shall record the pressure drop across the bin vent filter system every eight hours whenever the process is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]

(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the bin vent filter system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) Instrumentation to monitor the pressure drop across the bin vent filter system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]

(5) The permittee shall submit written reports of the results of all performance test conducted to demonstrate compliance with the visible emission limits in I.W.2.a. including reports of opacity observations made using EPA Method 9. [s. 285.65(3), Wis. Stats.]

Note 1: The proposed operation is subject to New Source Performance Standards (NSPS) under s. NR 440.688(3), Wis. Adm. Code and the limit is 7% opacity.
### X. S178, P178 - Coal Transfer Tower No. 2a Dust Collector and S179, P179 – Coal Transfer Tower No. 2b

The following emission limits apply to each Process

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Particulate Matter Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
<td>0.004 grains per dry standard cubic foot of exhaust gas and 2.197 pounds per hour. (BACT) [s. NR 415.06(2)(c), Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
<td></td>
</tr>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.31 [s. NR 439.07, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(2) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
<td></td>
</tr>
<tr>
<td>(a) The stack height for S178 shall be at least 80 feet above ground level and the stack height for S179 shall be at least 60.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(b) The stack inside diameter at the outlet for S178 may not exceed 3.7 feet and the stack inside diameter at the outlet for S179 may not exceed 3.2 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) (a) The transfer tower #1 will be completely enclosed structure. (b) Particulate matter emissions shall be controlled using a fabric filter baghouse system. [s. NR 405.08(2), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(5) The operating pressure drop range across the fabric filter baghouse system shall be determined during the initial testing period. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(6) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.X.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(7) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(8) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
<td></td>
</tr>
<tr>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(5) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
<td></td>
</tr>
</tbody>
</table>

---

3 I If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
XI.  S178, P178 - Coal Transfer Tower No. 2a Dust Collector and S179, P179 – Coal Transfer Tower No. 2b

The following emission limits apply to each Process

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>2. Visible Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations:</td>
<td>10% opacity [s. NR 431.05, Wis. Adm. Code, s. NR 405.09, Wis. Adm. Code, s. NR 440.42(3)(c), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
<tr>
<td>(1) The fabric filter baghouse system shall be in line and shall be operated at all times that the dust collection system is in operation. [s. NR 406.10, Wis. Adm. Code, s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The pressure drop across the fabric filter baghouse system shall be maintained within the range identified by condition I.X.1.b.(5). [s. NR 407.09(4)(a)1., Wis. Adm. Code]</td>
<td>(2) The permittee shall record the pressure drop across the fabric filter baghouse system every eight hours whenever the dust collection system is in operation. [s. NR 439.055(2)(b)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The process shall be monitored in accordance with a Fugitive Dust Control Plan. The Department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. 285.65(3), Wis. Stats.]</td>
<td>(3) The permittee shall keep records of all inspections, checks and any maintenance or repairs performed on the fabric filter baghouse system, containing the date of the action, initials of inspector, and the results. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) Whenever fugitive dust emissions are observed from the process, the permittee shall take corrective actions to prevent fugitive dust from becoming airborne. [s. 285.65(3), Wis. Stats.]</td>
<td>(4) Instrumentation to monitor the pressure drop across the fabric filter baghouse system shall be installed and operated properly. [s. NR 439.055(1)(a), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

Note 1: The coal handling/storage operations are subject to s. NR 440.42(3)(c), Wis. Adm. Code (New Source Performance Standards, NSPS requirements) for visible emissions. For these operation, s. NR 440.42(3)(c), Wis. Adm. Code prohibits visible emissions of 20 percent opacity or greater for any coal processes and conveying equipment, coal storage system, or coal transfer and loading system. The limit for opacity established for this process is more restrictive than NSPS limits for opacity, thus the coal handling/storage operation is expected to be in compliance with the opacity emission limits under NSPS.

The following emission limits to each coal pile.

Pollutant: 1. Fugitive Dust (PM/PM10)

a. Limitations: No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1

b. Compliance Demonstration:

(1) Coal loaded out to the inactive coal storage pile shall be compacted in accordance with standard coal pile maintenance procedures. (b) Once compacted, the bulk of the pile will be left undisturbed (inactive). [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(2) A surfactant (wet suppression spray and/or surface stabilizing agent) or cover material(s), shall be applied to the pile. The surfactant (wet suppression spray and/or surface stabilizing agent) shall be applied to the active area of the pile at the beginning and end of each at stack out and reclaim activity. (b) In addition to the beginning and ending applications, surfactant (wet suppression spray and/or surface stabilizing agent) will also be applied to the active area during reclaim activities whenever any visible emissions are seen beyond the coal pile boundary or whenever, in the option of the trained person, additional surfactant (wet suppression spray and/or surface stabilizing agent) is needed. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(3) The permittee shall conduct weekly inspections of the inactive coal storage pile. (b) Additional surfactant will be applied whenever any visible emissions are seen beyond the coal pile boundary or whenever, in the opinion of the trained person, additional surfactant is needed. (c) In addition to weekly inspections, daily inspections of the active coal pile area, to determine the continued effectiveness of the surfactant, will be conducted by a trained person whenever coal is reclaimed from the pile. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]

(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]

(4) The Trained Person designated by condition I.Y.1.b.(5) shall sign and date the records required in I.Y.1.c.(4) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]

(5) The permittee shall ensure that records of the Trained Person designated by condition I.Y.1.b.(6)’s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the prosperity fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
The following emission limits to each coal pile.

**Pollutant:** 1. Fugitive Dust (PM/PM10)

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(5) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(6) The permittee shall ensure that the Trained Person designated: (a) Has training to evaluate compliance with Wisconsin air quality regulations, or (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
Pollutant: 1. Fugitive Dust (PM/PM10)

a. Limitations: No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1

b. Compliance Demonstration:

1. (a) The limestone pile shall be wetted by means of a wet suppression system whenever visible emissions are seen beyond the limestone pile boundary or whenever in the opinion of the trained person, additional wet suppression is necessary. (b) Weekly inspections of the limestone storage pile will be conducted to insure the pile contains the proper moisture content to prevent fugitive dust emissions. (c) Daily inspections to determine the continued effectiveness of fugitive dust control measures shall be conducted whenever limestone is reclaimed to the limestone preparation building. (d) Limestone shall be transferred from the pile to the limestone preparation building in a covered conveyor. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

2. The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits.[s. NR 415.04(1)(b), Wis. Adm. Code]

3. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]

4. The permittee shall ensure that the Trained Person designated:
   (a) Has training to evaluate compliance with Wisconsin air quality regulations, or
   (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or
   (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit.[s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]

3. These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]

4. The Trained Person designated by condition I.Z.1.b.(3) shall sign and date the records required in I.Z.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]

5. The permittee shall ensure that records of the Trained Person designated by condition I.Z.1.b.(4)’s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
### Pollutant: Fugitive Dust (PM/PM10)

**a. Limitations:** No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. Fixed portions of coal load-out to outdoor storage system shall be conducted within a covered conveyor to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

2. Dust created during coal load-out shall be suppressed using a liquid spray to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

3. Coal shall be transferred from the conveyor to the storage pile using a telescoping spout to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

4. The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]

5. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]

6. The permittee shall ensure that the Trained Person designated:
   - (a) Has training to evaluate compliance with Wisconsin air quality regulations, or
   - (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or
   - (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. (a) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records including the use of wet suppression system. (b) The records shall consist of the date, time, observations, and any actions taken including the start and end times the wet suppression system is used. [s. NR 415.04(1)(b), Wis. Adm. Code]

3. These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]

4. The Trained Person designated by condition I.AA.1.b.(5) shall sign and date the records required in I.AA.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]

5. The permittee shall ensure that records of the Trained Person designated by condition I.AA.1.b.(6)’s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]

**Note 1:** When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
### BB. F37, S37 – Limestone Barge Unloading; F38, S38 - Limestone StackOut

**Pollutant:** 1. Fugitive Dust (PM/PM10)

#### a. Limitations:
No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. 

- [s. NR 405.09, Wis. Adm. Code, s. NR 440.688(3), Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.]  See Note 1

#### b. Compliance Demonstration:

1. (a) Limestone shall be unloaded from the barge using either a screw auger (or rotary screw) or an enclosed hydraulic clamshell to meet the BACT limits. (b) Limestone load-out to outdoor storage shall be conducted within a covered conveyor equipped with a telescopic chute.  

2. Dust shall be suppressed using a liquid spray to meet BACT limits. 

3. The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. 

4. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan.

5. The permittee shall ensure that the Trained Person designated:
   - (a) Has training to evaluate compliance with Wisconsin air quality regulations, or
   - (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or
   - (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit.

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance. 

2. The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records.

3. These records shall be kept for a period of 5 years and be made available to Department personnel upon request.

4. The Trained Person designated by condition I.BB.1.b.(4) shall sign and date the records required in I.BB.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant.

5. The permittee shall ensure that records of the Trained Person designated by condition I.BB.1.b.(5)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation.

---

**Note 1:** When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
## Pollutant: Gypsum Dock Side Storage Pile and Barge Loading Activity

### Pollutant: 1. Fugitive Dust (PM/PM10)

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
<tr>
<td>(1) Gypsum loaded out to the dock side storage pile shall be covered with a tarp of sufficient size to cover the entire pile to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) A portion of the pile can be maintained in an &quot;active&quot; state to allow for appropriate barge loading activities to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Active portions of the pile shall be wetted by means of a supplemental wet suppression system to a moisture content consistent with proper fugitive dust control whenever visible emissions are seen beyond the gypsum pile boundary or whenever, in the opinion of the trained person, addition wet suppression is necessary. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) Weekly inspections of the dock side gypsum storage pile will be conducted to insure that the pile is either covered or contains the proper moisture content to prevent fugitive dust emissions to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(4) The Trained Person designated by condition I.CC.1.b.(9) shall sign and date the records required in I.CC.1.c.(8) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(5) Daily inspections of the active area to determine the continued effectiveness of fugitive dust control measures, shall be conducted by the trained person whenever gypsum is loaded out to the barge to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td>(5) The permittee shall ensure that records of the Trained Person designated by condition I.CC.1.b.(10)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(6) The permittee shall transfer gypsum from the conveyor to the dock-side storage using a telescoping chute to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
Pollutant: 1. Fugitive Dust (PM/PM10) [CONTINUED]

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(8) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits.[s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(9) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(10) The permittee shall ensure that the Trained Person designated:</td>
<td></td>
</tr>
<tr>
<td>(a) Has training to evaluate compliance with Wisconsin air quality regulations, or</td>
<td></td>
</tr>
<tr>
<td>(b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or</td>
<td></td>
</tr>
<tr>
<td>(c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
DD. F122, F124, S122, S124 – Gypsum Drop Side Pile and Barge Loading Drop Points

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>1.  Fugitive Dust (PM/PM10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations:</td>
<td>No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td></td>
</tr>
<tr>
<td>(1) Fixed portions of the gypsum load-out to outdoor storage system shall be conducted within a covered conveyor to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(2) Dust created during gypsum loadout shall be suppressed using a liquid spray to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(3) Gypsum shall be transferred from the conveyor to the storage pile using a telescoping spout to meet the BACT limits, [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(4) The permittee shall use a covered conveyor equipped with a telescopic chute or enclosed clamshell when loading Gypsum to the pile to meet the BACT limits. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(5) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(6) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(7) The permittee shall ensure that the Trained Person designated: (a) Has training to evaluate compliance with Wisconsin air quality regulations, or (b) Has obtained certification as a Method 9 opacity observer in the last 2 years , or (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
<td></td>
</tr>
<tr>
<td>(1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(4) The Trained Person designated by condition I.DD.1.b.(6) shall sign and date the records required in I.DD.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(5) The permittee shall ensure that records of the Trained Person designated by condition I.DD.1.b.(6)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
EE. F125, S125 – Fuel Ash Reclaim – Maintenance and Front End Loader Excavate Drop to Trucks

Pollutant: 1. Fugitive Dust (PM/PM10)

a. Limitations:
   1. No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source.
   2. The process may be operated only during the hours from 7:00 am to 7:00 PM. The permittee has elected this restriction to ensure the PM10 ambient air quality standards are not exceeded. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1

b. Compliance Demonstration:
   1. The fuel ash reclaim area shall be wetted by means of a wet suppression system whenever visible emissions are seen beyond the area's boundary or whenever, in the opinion of the trained person, additional wet suppression is necessary to meet the BACT limits. [s. 285.65(3), Wis. Stats.]
   2. Weekly inspections of the fuel ash reclaim area will be conducted by a trained person to insure that the material to be reclaimed contains adequate moisture content to prevent fugitive dust emissions to meet BACT limits. [s. 285.65(3), Wis. Stats.]
   3. In addition to weekly inspections, daily inspections, to determine the continued effectiveness of fugitive dust control measures, shall be conducted by the trained person, whenever fuel ash is reclaimed to meet BACT limits. [s. 285.65(3), Wis. Stats.]
   4. The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]
   5. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]
   6. The permittee shall ensure that the Trained Person designated:
      (a) Has training to evaluate compliance with Wisconsin air quality regulations, or
      (b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or
      (c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:
   1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]
   2. The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]
   3. These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]
   4. The Trained Person designated by condition I.EE.1.b.(5) shall sign and date the records required in I.EE.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]
   5. The permittee shall ensure that records of the Trained Person designated by condition I.EE.1.b.(6)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]
   6. The permittee shall record the start and end times of the operation to demonstrate compliance with condition I.EE.1.a.(2). [s. 285.65(3), Wis. Stats.]

Note 1: When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
### Pollutant:
1. Fugitive Dust (PM/PM10)

#### a. Limitations
1. No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source.
2. The process may be operated only during the hours from 7:00 am to 7:00 PM. The permittee has elected this restriction to ensure the PM10 ambient air quality standards are not exceeded. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1

#### b. Compliance Demonstration:
1. The landfill shall be wetted by means of a wet suppression system whenever visible emissions are seen beyond the landfill boundary or whenever, in the opinion of the trained person, additional wet suppression is necessary to meet the BACT limits. [s. 285.65(3), Wis. Stats.]
2. Weekly inspections of the materials storage landfill will be conducted by a trained person to ensure that the material to be restored and reclaimed contains adequate moisture content to prevent fugitive dust emissions to meet BACT limits. [s. 285.65(3), Wis. Stats.]
3. In addition to weekly inspections, daily inspections, to determine the continued effectiveness of fugitive dust control measures, shall be conducted by the trained person, whenever fuel ash is reclaimed to meet BACT limits. [s. 285.65(3), Wis. Stats.]
4. The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]
5. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]
6. The permittee shall ensure that the Trained Person designated:
   a. Has training to evaluate compliance with Wisconsin air quality regulations, or
   b. Has obtained certification as a Method 9 opacity observer in the last 2 years, or
   c. Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]
2. The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]
3. These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]
4. The Trained Person designated by condition I.FF.1.b.(5) shall sign and date the records required in I.FF.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]
5. The permittee shall ensure that records of the Trained Person designated by condition I.FF.1.b.(6)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]
6. The permittee shall record the start and end times of the operation to demonstrate compliance with condition I.FF.1.a.(2). [s. 285.65(3), Wis. Stats.]

---

**Note 1:** When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
### GG. F174, F173, S173, S174 – Front End Loader reclaim of bottom ash – SCPC units to trucks

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>1. Fugitive Dust (PM/PM10)</th>
</tr>
</thead>
</table>
| **a. Limitations:** | (1) No owner or operator may cause or allow emissions of density greater than 10% opacity from each fugitive dust source.  
(2) The process may be operated only during the hours from 7:00 am to 7:00 PM. The permittee has elected this restriction to ensure the PM10 ambient air quality standards are not exceeded. [s. NR 405.09, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1 |
| **b. Compliance Demonstration:** | (1) Dust created during bottom ash reclamation activities shall be suppressed using a water spray to meet BACT limits. [s. NR 405.08, Wis. Adm. Code, s. NR 406.10, Wis. Adm. Code, s. NR 415.04(1)(b), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]  
(2) The permittee shall develop and follow a Fugitive Dust Control Plan for the subject site and operation. Any provisions of the plan that are applicable to the site are only applicable to the site while the plant is operated at the site. The Fugitive Dust Control Plan shall identify the specific measures to be taken, when needed and frequency needed to maintain emissions in compliance with emission limits. For example, specific dust control measures could include: watering all roads hourly and amount of water used, use of spray bars including amount and rate of water applied, or use of other approved dust suppressants. The department may request the permittee to review and amend the plan if necessary to maintain emissions in compliance with emission limits. [s. NR 415.04(1)(b), Wis. Adm. Code]  
(3) The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]  
(4) The permittee shall ensure that the Trained Person designated:  
(a) Has training to evaluate compliance with Wisconsin air quality regulations, or  
(b) Has obtained certification as a Method 9 opacity observer in the last 2 years, or  
(c) Has attended appropriate training in other states or has other reasonable qualifications for being a Trained Person and the permittee has received written approval from the Department that such a person qualifies as a Trained Person for the purpose of this permit. [s. 285.65(3), Wis. Stats.] |
| **c. Test Methods, Recordkeeping, and Monitoring:** | (1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]  
(2) The permittee, for each day of operation of the plant, shall ensure that a person at the site keeps records of specific measures taken for that day in accordance with the Fugitive Dust Control Plan and signs and dates such records. [s. NR 415.04(1)(b), Wis. Adm. Code]  
(3) These records shall be kept for a period of 5 years and be made available to Department personnel upon request. [s. NR 415.04(1)(b), Wis. Adm. Code]  
(4) The Trained Person designated by condition I.GG.1.b.(3) shall sign and date the records required in I.GG.1.c.(2) of specific measures taken in accordance with a Fugitive Dust Control Plan for each day of operation of the plant. [s. 285.65(3), Wis. Stats.]  
(5) The permittee shall ensure that records of the Trained Person designated by condition I.GG.1.b.(4)'s training or Method 9 certification or other training or qualifications are available at the plant at all times of operation. [s. 285.65(3), Wis. Stats.]  
(6) The permittee shall record the start and end times of the process to demonstrate compliance with condition I.GG.1.a.(2). [s. 285.65(3), Wis. Stats.] |

**Note 1:** When trained staff observe visible emissions at the process itself of 10% or more, or at the property fence line of 5% or more, the trained staff will initiate actions to control fugitive emissions. The actions could include increased watering, increased application of dust suppressants, or increased street sweeping depending upon the nature of the emissions.
### HH. F134 – Facility Haul Roads

**Pollutant:** 1. Fugitive Dust (PM/PM10)

| a. Limitations: The permittee shall apply Best Available Control Technology (BACT). BACT shall be met by the use a) paving the haul roads. b) Use of trucks washing stations and c) of a high efficiency vacuum street sweeper. [s. NR 405.08, Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(3), Wis. Stats.] See Note 1
| b. Compliance Demonstration: |
| c. Test Methods, Recordkeeping, and Monitoring: |

1. All facility haul roads shall be paved to meet the BACT limits. [s. NR 405.08, Wis. Adm. Code]

2. All facility haul roads shall be vacuum swept, at minimum, twice daily (except when weather conditions exist such that precipitation and/or ambient temperature would control fugitive emissions or prevent vacuum sweeping's effectiveness). If, in the opinion of the trained person additional roadways vacuum sweeping is necessary to prevent inappropriate fugitive dust emissions it will be conducted as soon as practical. [s. NR 405.08, Wis. Adm. Code]

3. Truck washing stations shall be installed and used near four locations where removal of mud, dirt and dust must occur, the SCPC ash loading stations, the IGCC slag loading station, the fuel ash reclaim area, and the Caledonia landfill area. [s. NR 405.08, Wis. Adm. Code]

4. The permittee shall identify at least one Trained Person designated to monitor compliance, in accordance with this permit, with the Fugitive Dust Control Plan. [s. 285.65(3), Wis. Stats.]

1. Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

2. The permittee shall ensure that the trained Person at the site keep(s) daily records consisting of the date and time roadway sweeping occurred or the date and reasons why it did not. [s. 285.65(3), Wis. Stats., s. NR 415.04(1)(b), Wis. Adm. Code]

The following emission limits apply to each IGCC Combustion Turbine.

**Pollutant:** 1. Particulate Matter Emissions

a. **Limitations:** (1) The emissions may not exceed 0.011 pound per million Btu including startup and shut down. (BACT); (2) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats]

b. **Compliance Demonstration:**

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.32 [s. NR 439.07, Wis. Adm. Code]

(2) The permittee shall perform the compliance emission tests required under condition I. II.1.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(3) **Stack Parameters** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   (a) The stack height shall be at least 275.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   (b) The stack inside diameter at the outlet may not exceed 20.0 feet. [s. 285.65(3), Stats., s. NR 406.10, Wis. Adm. Code]

(4) The permittee shall fire only fire syngas as the primary fuel with fuel oil having a maximum sulfur content of 0.003% sulfur by weight for start up. This condition is established to meet BACT emission limit. [ s. NR 405.08(2), Wis. Adm. Code]

(5) The permittee shall demonstrate good combustion practices by:

   (a) monitoring appropriate combustion operating parameters. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

(1) **Reference Test Method for Particulate Matter Emissions:** Whenever compliance emission testing is required, test procedures in US EPA Method 5, including backhalf (Method 202) or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

(2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. (s. NR 439.04(1)(d), Wis. Adm. Code)

(2) During operation, the facility will monitor and record the following operating parameters on an hourly basis:

   (a) Combustion turbine inlet temperature

   (b) Combustion turbine firing temperature

   (c) Combustion turbine exhaust temperature

   (d) Coal fuel flow rate

   [s. 285.65(10), Wis. Stats.]

(4) During initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.II.1.c.(3) to establish normal operational ranges for use as a compliance demonstration. [s. 285.65(10), Wis. Stats.]

(5) The permittee shall install, calibrate, and maintain instrumentation to monitor the parameters identified by condition I.II.1.c.(3)a. – d. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

32 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each IGCC Combustion Turbine.

**Pollutant:** 2. Particulate Matter Emissions less than 10 microns (PM10)

a. **Limitations:** (1) The emissions may not exceed 0.011 pound per million Btu including startup and shut down. (BACT); (2) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats]

b. **Compliance Demonstration:**

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.33 [s. NR 439.07, Wis. Adm. Code]

(2) The permittee shall perform the compliance emission tests required under condition I.II.2.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(3) **Stack Parameters:** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   a. The stack height shall be at least 275.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   b. The stack inside diameter at the outlet may not exceed 20.0 feet. [s. 285.65(3), Stats., s. NR 406.10, Wis. Adm. Code]

(4) The permittee shall fire only fire syngas as the primary fuel with fuel oil having a maximum sulfur content of 0.003% sulfur by weight for start up. This condition is established to meet BACT emission limit. [ s. NR 405.08(2), Wis. Adm. Code]

(5) The permittee shall demonstrate good combustion practices by:

   a. monitoring appropriate combustion operating parameters. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

   b. **Compliance Demonstration:**

   (1) Reference Test Method for Particulate Matter Emissions:
   Whenever compliance emission testing is required, test procedures in US EPA Method 5, including backhalf (Method 202) or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]

   (2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. (s. NR 439.04(1)(d), Wis. Adm. Code)

   (3) During operation, the facility will monitor and record the following operating parameters on an hourly basis:

      a. Combustion turbine inlet temperature
      b. Combustion turbine firing temperature
      c. Combustion turbine exhaust temperature
      d. Coal fuel flow rate
   [s. 285.65(10), Wis. Stats.]

   (4) During initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I.II.2.c.(3) to establish normal operational ranges for use as a compliance demonstration. [s. 285.65(10), Wis. Stats.]

   (5) The permittee shall install, calibrate, and maintain instrumentation to monitor the parameters identified by condition I.II.2.c.(3)a. – d. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

---

33 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### II. S39, B39 – Integrated Gasification Combined Cycle (IGCC) 1; S40, B40 – Integrated Gasification Combined Cycle (IGCC) 2.
The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>3. Sulfur Dioxide Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations:</td>
<td>(a) 0.015 percent by volume at 15% O2 on a dry basis. (NSPS) [s. NR 440.50(4)(a), Wis. Adm. Code]; or (b) fuel sulfur content less than or equal to 0.8% by weight. (NSPS) [s. NR 440.50(4)(b), Wis. Adm. Code]; (2) 0.03 pound per million Btu heat input, based on a 24-hour average including startup and shut down. (BACT) [s. NR 405.08(2), Wis. Adm. Code]; (3) 40 ppmvd sulfur in the gasified (syngas) fuel (expressed as hydrogen sulfide). (BACT) [s. NR 405.08(2), Wis. Adm. Code]; (4) 278 tons in any 12 consecutive months for all periods, including startup and shut down, (BACT) [s. NR 405.08(2), Wis. Adm. Code]; (5) The sulfur content of fuel oil to be used during periods of start-up and shut down may not exceed 0.003% by weight. (BACT) [s. NR 405.08(2), Wis. Adm. Code].</td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.34 [s. NR 439.07, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) The permittee shall perform the compliance emission tests required under condition I. II.3.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(3) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.</td>
</tr>
<tr>
<td></td>
<td>(a) The stack height shall be at least 275.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(b) The stack inside diameter at the outlet may not exceed 20.0 feet. [s. 285.65(3), Stats., s. NR 406.10, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) Each combustion turbine may only be fired on syngas, except for periods of startup and load stabilization when distillate fuel oil may also be utilized as a fuel. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(5) Sulfur Dioxide Emission shall be controlled by a syngas cleanup system. [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.20(4)(a)1., Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(6) Compliance with the sulfur dioxide emission limit contained in I. II.3.a.(3) shall be demonstrated either through the use of (a) daily syngas sampling and analysis or (b) through the use of a sulfur dioxide continuous emission monitoring system (CEMs). [s. NR 405.08(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(6) Compliance with the sulfur dioxide BACT emission limit contained in I. II.3.a.(3) constitutes compliance with the emission limit contained in I. II.3.a.(1) and (2) as I. II.3.a.(3) is a more restrictive limit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(7) The sulfur content of fuel oil to be used during periods of startup and load stabilization may not exceed 0.003% by weight. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
<td>(1) Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, test procedures in US EPA Method 6, 6A or 6C or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(3) The provision of I. II.3.b.(5)(b) shall be satisfied through the installation and use of a continuous emissions monitoring system (CEMs) for sulfur dioxide and carbon dioxide or oxygen content of the flue gases at each location where sulfur dioxide emissions are monitored within 60 days after initial startup of the combustion turbine. The CEMs shall be calibrated within 90 days after initial startup of the combustion turbine. Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 75 and s. NR 439.06(6)(b), Wis. Adm. Code requirements. [s. 285.65(3), Wis. Stats., s. NR 439.06, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(4) Continuous emission monitoring methods and procedures shall comply with the requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.09, Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(6) The permittee shall comply with NSPS monitoring of operations requirements per s. NR 440.50(5), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 440.50(5), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
<td>(7) The permittee shall use test methods and procedure per s. NR 440.50(6), Wis. Adm. Code to comply with the NSPS emission limits. [s. NR 440.50(6), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

---

34 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).

The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Limitations:</strong> (1) The emissions may not exceed 15 ppmvd, corrected to 15% oxygen on a 30 day rolling average basis, not including periods of startup and shut down, on a 30 day rolling basis. (BACT); (2) The emissions may not exceed 15 ppmvd, corrected to 15% oxygen on a 30 day rolling average basis, including periods of startup and shut down, averaged over any consecutive 12 month period. (BACT); (3) 75 ppm @ 15% Oxygen. (NSPS); (4) The use of a diluent injection system (DIS) (BACT). [s. NR 405.08(2), Wis. Adm. Code. s. NR 440.50(3), Wis. Adm. Code. s. NR 428.04(g)(3), Wis. Adm. Code. s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]</td>
</tr>
</tbody>
</table>

### b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]

(2) The permittee shall perform the compliance emission tests required under condition I.II.4.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(3) **Stack Parameters**: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.

   (a) The stack height shall be at least 275.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

   (b) The stack inside diameter at the outlet may not exceed 20.0 feet. [s. 285.65(3), Stats., s. NR 406.10, Wis. Adm. Code]

(4) **Nitrogen Oxides Emission shall be controlled by a diluent injection system to meet BACT limits.** [s. NR 405.08(2), Wis. Adm. Code]

(5) The permittee shall demonstrate compliance with the nitrogen oxides emission limit contained in I.II.4.a.(1) using emissions data measured by the continuous emission monitoring system required by I.II.4.c.(2) as follows:

   (a) **Daily average concentration shall be calculated each calendar day by combining the nitrogen oxides concentration and diluent concentration (in % O2 or % CO2) measurement consistent with the procedures specified in 40 CFR 75 Appendix F.** [s. 285.65(10), Wis. Stats.]

   (b) Each monthly nitrogen oxide emissions average shall be calculated by dividing the sum of all daily averages calculated during the month by the number of daily average calculated during the month. [s. 285.65(3), Wis. Stats.]

   (c) Each 12-month nitrogen oxide emissions average shall be calculated as the average of the past 12 monthly emissions average. [s. 285.65(3), Wis. Stats.]

(6) Compliance with the nitrogen oxides BACT emission limit contained in I.II.4.a.(1) constitutes compliance with the NSPS emission limit as the BACT emission limits is more restrictive then the NSPS emission limit. [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

(1) **Reference Test Method for Nitrogen Oxides Emissions**: Whenever compliance emission testing is required, test procedures in US EPA Method 7 or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]

(2) The permittee shall install and operate continuous emissions monitoring system (CEMs) for NOx and carbon dioxide or oxygen within 60 days after initial start up of IGCC. The CEMs shall be calibrated within 90 days after initial start up of the IGCC. Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 75 and s. NR 439.06(6)(b), Wis. Adm. Code requirements. [s. 285.65(3), Wis. Stats., s. NR 439.06, Wis. Adm. Code]

(3) Continuous emission monitoring methods and procedures shall comply with the requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.09, Wis. Adm. Code]

(4) The permittee shall comply with the general and specific monitoring requirements under s. NR 428.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(5) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(6) The permittee shall comply with all the requirements for monitoring, installation, certification, data accounting, compliance dates and reporting data prior to initial certification as required under s. NR 428.07(1)(b), Wis. Adm. Code. s. NR 428.07(2)(b)2, Wis. Adm. Code, s. NR 428.07(3), Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]

(7) The permittee shall monitor NOx and heat input per s. NR 428.08(1)(e), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(8) The permittee shall submit quarterly reports per s. NR 428.09(2), (3) and (4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(9), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(7) The permittee shall keep track of the startup and shut down time by monitoring the fuel combusted in the turbine. Startup periods begin with the firing of any fuel in the combustion turbine, and end with the introduction of syngas to the combustion turbine. Shut down periods begin with the cessation of syngas flow to the combustion turbine, and end with the cessation of all fuel firing.[s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(9) The permittee shall comply with NSPS monitoring of operations requirements per s. NR 440.50(5), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 440.50(5), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(10) The permittee shall use test methods and procedure per s. NR 440.50(6), Wis. Adm. Code to comply with the NSPS emission limits. [s. NR 44.50(6), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(11) The permittee shall keep records required under condition I.II.4.b.(5)(b), (c) and I.II.4.b.(7). [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

The following emission limits apply to each IGCC Combustion Turbine.

### Pollutant: 5. Carbon Monoxide Emissions

#### a. Limitations:

1. The emissions may not exceed 0.030 pound per million Btu on a 24-hour rolling average, excluding periods of startup and shut down. (BACT);
2. The use of good combustion practices. (BACT);
3. 624 pounds per hour during any one hour period, including startup and shut down. (4) 282 tons in any 12 consecutive months for all periods, including startup and shut down. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

#### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.36 [s. NR 439.07, Wis. Adm. Code]
2. The permittee shall perform the compliance emission tests required under condition I. II.5.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
3. Carbon Monoxide Emissions shall be controlled using good combustion practices to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
4. The permittee shall demonstrate compliance with the BACT limit by: (a) monitoring appropriate combustion operating parameters or (b) through the use of a CO CEMs. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
5. The permittee shall demonstrate compliance with the carbon monoxide emission limits using data from a continuous emissions monitoring system (CEMs) for CO and carbon dioxide or oxygen required under condition I. II.5.c.5 as follows:
   - (a) Daily average shall be determined by calculating the arithmetic average of all applicable hourly emission rates for a calendar day.
   - (b) The hourly emission rate shall be calculated by combining the CO concentration and diluent concentration (in % O2 or % CO2) measurement consistent with the procedures specified in 40 CFR Part 75 Appendix F. The conversion factor, (k), shall be 0.7266 x 10-7 lb CO/ft3 - ppm.
   - (c) The annual emission limit in I. II.a.(4) shall be calculated using and totally the hourly calculated emission rate. [s. 285.65(3), Wis. Stats.]
6. The permittee shall keep track of the startup and shut down time by monitoring the fuel combusted in the turbine. Startup periods begin with the firing of any fuel in the combustion turbine, and end with the introduction of syngas to the combustion turbine. Shutdown periods begin with the cessation of syngas flow to the combustion turbine, and end with the cessation of all fuel firing. [s. 285.65(3), Wis. Stats.]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, test procedures in US EPA Method 10 or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(4), Wis. Adm. Code]
2. During operation, the facility will monitor and record the following operating parameters on an hourly basis:
   - (a) Combustion turbine inlet temperature
   - (b) Combustion turbine firing temperature
   - (c) Combustion turbine exhaust temperature
   - (d) Coal flow rate
   [s. 285.65(10), Wis. Stats.]
3. During initial performance testing, the permittee shall perform simultaneous monitoring of the parameters identified in condition I. II.5.c.(2) to establish normal operational ranges for use as a compliance demonstration. [s. 285.65(10), Wis. Stats.]
4. The permittee shall install, calibrate, and maintain instrumentation to monitor the parameters identified by condition I. II.1.c.(3)a. – d. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
5. The permittee shall install and operate continuous emissions monitoring system (CEMs) for CO and carbon dioxide or oxygen within 60 days after initial start up of IGCC. The CEMs shall be calibrated within 90 days after initial start up of the IGCC. Continuous emissions monitoring systems shall be installed and operated in accordance with 40 CFR Part 75 and s. NR 439.06(6)(b), Wis. Adm. Code requirements. [s. 285.65(3), Wis. Stats., s. NR 439.06, Wis. Adm. Code]
6. Continuous emission monitoring methods and procedures shall comply with the requirements of s. NR 439.09, Wis. Adm. Code. [s. NR 439.09, Wis. Adm. Code]
7. The permittee shall keep records required under condition I. II.5.b.(5)(b), (c) and I. II.5.b.(6). [s. 285.65(3), Wis. Stats.]

---

36 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).

The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations:</td>
<td>(1) 0.0017 pound per million Btu heat input excluding periods of startup and shut down averaged over any consecutive 24-hour period. Startup periods begin with the firing of any fuel in the combustion turbine, and end with the introduction of syngas to the combustion turbine. Shutdown periods begin with the cessation of syngas flow to the combustion turbine, and end with the cessation of all fuel firing. (LAER); (2) 3.64 pounds per hour excluding periods of startup and shut down, averaged over any consecutive 24-hour period. (LAER); (3) 16.93 tons in any 12 consecutive months for all periods, including startup and shut down. (LAER); (4) The use of good combustion practices. (LAER) [s. NR 408.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats]</td>
</tr>
<tr>
<td>b. Compliance Demonstration:</td>
<td>c. Test Methods, Recordkeeping, and Monitoring:</td>
</tr>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.37 [s. NR 439.07, Wis. Adm. Code]</td>
<td>(1) Reference Test Method for VOC Emissions: Whenever compliance emission testing is required, test procedures in US EPA Method 25 or 18 or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall perform the compliance emission tests required under condition I.II.6.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(2) During operation, the facility will monitor and record the following operating parameters on an hourly basis:</td>
</tr>
<tr>
<td>(3) Volatile Organic Compound Emissions shall be controlled using good combustion practices to meet LAER emission limit. [s. NR 408.08(2), Wis. Adm. Code]</td>
<td>(a) Combustion turbine inlet temperature</td>
</tr>
<tr>
<td>(4) The permittee shall demonstrate compliance with the LAER limit by: (a) monitoring appropriate combustion operating parameters or (b) through the use of a CO CEMs. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(b) Combustion turbine firing temperature</td>
</tr>
<tr>
<td>(5) CO emissions data measured by the CEM system shall be used to demonstrate compliance with the LAER emission limit by using the following equation to keep daily, monthly and annual VOC emissions records:</td>
<td>(c) Combustion turbine exhaust temperature</td>
</tr>
<tr>
<td>VOC actual = VOC limit X (CO actual/CO limit) [s. 285.65(3), Wis Stats., s. 285.65(10), Wis. Stats.]</td>
<td>(d) Coal flow rate [s. 285.65(10), Wis. Stats.]</td>
</tr>
</tbody>
</table>

37 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each IGCC Combustion Turbine.

**Pollutant:** 7. Lead Emissions

a. Limitations: (1) The emissions may not exceed 0.0000257 pound per million Btu including startup and shut down. (BACT); (2) The use of good combustion practices. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

b. Compliance Demonstration:

(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.38 [s. NR 439.07, Wis. Adm. Code]

(2) The permittee shall perform the compliance emission tests required under condition I.II.7.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(3) Lead Emissions shall be controlled using good combustion practices and firing syngas as the primary fuel with 0.003% low sulfur fuel for startup to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(4) The permittee shall demonstrate compliance with the BACT limit by complying with the conditions in I.II.1.b. [s. 285.65(3), Wis. Stats.; s. 285.65(10), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:

(1) Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, test procedures in US EPA Method 12, or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

---

38 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).

The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th>Pollutant: 8. Mercury Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Limitations: (1) The emissions may not exceed 0.56lb/trillion Btu based on a 12-month rolling average including startup and shut down. (BACT); (2) The use of carbon bed or equivalent control technology capable of achieving 95% control of mercury emissions. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats] See Note 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.39 [s. NR 439.07, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall perform the compliance emission tests required under condition I.II.8.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) Mercury Emissions shall be controlled using Carbon bed or filter containing similar material in the synthetic gas specifically designed to control emissions of mercury contained in the fuel supply or such requirement for the effective control of mercury emissions as may be promulgated by USEPA as the MACT standard applicable to new stationary combustion turbines of an IGCC facility to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the carbon bed and (b) A list of items that will be checked and maintained and their frequency, to ensure that the carbon bed system is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td>(5) The permittee shall monitor uncontrolled mercury emissions through coal sampling and analysis. Such testing occur on a monthly basis according to the relevant provisions of s. NR 439.08, Wis. Adm. Code as applied to mercury content in the coal. The permittee shall also monitor monthly average coal higher heating value. [s. NR 405.08, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Reference Test Method for Mercury Emissions: Whenever compliance emission testing is required, test procedures in US EPA Method 29 or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall record information on the maintenance required in condition I.II.8.b.(4). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) The data obtained from the mercury content from the coal sampling and analysis shall be kept at the facility for a period of five years. [s. 285.65(3), Wis. Stats.]</td>
</tr>
</tbody>
</table>

Note 1: The BACT Limit for Mercury is based on uncontrolled mercury emissions of 11.2 pounds per trillion Btu and a control efficiency of 95%.

39 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emission limits apply to each IGCC Combustion Turbine.

**Pollutant:** 9. Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations: 20% opacity. [s. NR 431.05, Wis. Adm. Code]</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Compliance Demonstration:</td>
</tr>
<tr>
<td>(1) Opacity shall be controlled using good combustion practices. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The compliance demonstration methods identified in I.II.1.b. shall be used to demonstrate compliance with the visible emission limit. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Pollutant: 10. Hazardous air pollutants (inorganic solid HAPs, inorganic acid HAPs, Organic HAPs) regulated under sec. 112 of the Clean Air Act.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>a. Limitations:</strong> (1) The permittee shall use syngas cleanup system and use good combustion practices to meet case by case MACT for inorganic solid HAPs; (2) The permittee shall use syngas cleanup system and good combustion practices to comply with the case by case MACT limits for inorganic acid HAPs; (3) The permittee shall comply with good combustion practices and meet the VOC emission limits to comply with case by case MACT for organic HAPs. [s. 285.65(13), Wis. Stats., s. 285.65(3), Wis. Stats., 40 CFR Part 63, Subpart B]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The inorganic solid HAPs, acid gas HAPs and organic HAPs shall be controlled using a syngas clean up system and good combustion practices. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The compliance demonstration methods in I.II.1.b., I.II.3.b., I.II.6.b., shall be used as compliance demonstration techniques for inorganic solid HAPs, inorganic acid HAPs, and organic HAPs. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs: Whenever compliance emission testing is required an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The testing, recordkeeping and monitoring requirements contained in I.II.1.c., I.II.3.c. shall be used as compliance methods for I.II.10.b.(2). [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
</tbody>
</table>
The following emission limits apply to each IGCC Combustion Turbine.

<table>
<thead>
<tr>
<th>Pollutant:</th>
<th>Sulfuric Acid Mist</th>
</tr>
</thead>
</table>

**Limitations:**
1. The emissions may not exceed 0.0005 pound per million Btu, based on a 3-hour average including startup and shut down. (BACT)
2. The use of gas clean up system. (BACT) [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation. [s. NR 439.07, Wis. Adm. Code]
2. The permittee shall perform the compliance emission tests required under condition I. II.11.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
3. Sulfuric acid mist emissions shall be controlled by a gas clean up system. [s. NR 405.08(2), Wis. Adm. Code]
4. The compliance demonstration method identified in section I.II.3.b. shall be used as compliance demonstration techniques for sulfuric acid mist emission limitation. [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternative method approved in writing by the department, shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]

---

40 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
**JJ. S41, P41 – Sulfuric Acid Plant #1; S42, P42, Sulfuric Acid Plant #2**

The following emissions limits apply to each sulfuric acid plant.

<table>
<thead>
<tr>
<th>Pollutant: 1. Sulfur Dioxide Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong></td>
</tr>
<tr>
<td>(1) The emissions may not exceed 4.0 pounds per tons of 100% sulfuric acid produced. (BACT); (2) The use of a dual absorption plant and fiber mist eliminators to meet BACT limits. [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.24(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

---

Note 1: The sulfuric acid plant is subject to New Source Performance Standards (NSPS) for sulfur dioxide. The sulfur dioxide emissions limit to not exceed 4.0 pounds per tons 100% sulfuric acid produced per s. NR 440.24(3), Wis. Adm. Code. The sulfuric acid plant is expected to comply with the sulfur dioxide emission limits under NSPS.

---

41 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emissions limits apply to each sulfuric acid plant.

**Pollutant:** 2. Sulfur Acid Mist Emissions

**a. Limitations:**

1. The emissions may not exceed 0.128 pounds per tons. (BACT).
2. The use of a dual absorption plant and fiber mist eliminators to meet the BACT limits. [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.24(4)(a), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

**b. Compliance Demonstration:**

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.42 [s. NR 439.07, Wis. Adm. Code]
2. The permittee shall perform the compliance emission tests required under condition I.JJ.2.b.(1) every 24 months from the date of the last stack test as long as the permit remains valid. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
3. The permittee shall control sulfuric acid mist emissions through the use of a dual absorption plan and fiber mist eliminator. [s. NR 405.08(2), Wis. Adm. Code]
4. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the fiber mist eliminator and (b) A list of items that will be checked and maintained and their frequency, to ensure that the dual absorption plan and fiber mist eliminator is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
5. The permittee shall determine compliance with sulfuric acid emission limits per test methods and procedures identified in s. NR 440.24(6)(b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Sulfuric Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall record information on the maintenance required in condition I.JJ.2.b.(4). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

---

Note 1: The sulfuric acid plant is subject to New Source Performance Standards (NSPS) for sulfuric acid mist emissions. The sulfuric acid mist emissions limit to not exceed 0.15 pounds per tons 100% sulfuric acid produced per s. NR 440.24(4)(a), Wis. Adm. Code. The BACT limit for sulfuric acid mist is more restrictive than the NSPS limit for sulfuric acid mist. The sulfuric acid plant is expected to meet the NSPS limit for sulfuric acid mist.

42 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
The following emissions limits apply to each sulfuric acid plant.

**Pollutant:** 3. Visible Emissions

<table>
<thead>
<tr>
<th>a. Limitations</th>
<th>10% opacity  [s. NR 405.09, Wis. Adm. Code, s. NR 440.24(4)(a), Wis. Adm. Code, s. NR 431.05, Wis. Adm. Code, s. 285.65(13), Wis. Stats.]</th>
</tr>
</thead>
</table>
| b. Compliance Demonstration | (1) Compliance emission tests to demonstrate compliance with the visible emission limit shall be conducted within 60 days after the start of the initial operation. [s. 285.65(3), Wis. Stats.]  
(2) The permittee shall determine compliance with visible emission limits per test methods and procedures identified in s. NR 440.24(6)(b)4., Wis. Adm. Code. A copy of these requirements attached with the permit. [s. 285.65(3), Wis. Stats.] |
| c. Test Methods, Recordkeeping, and Monitoring | (1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code] |
### KK. S43, P43 – Gasifier Flare

**Pollutant:** 1. Particulate Matter Emissions (PM/PM10)

<table>
<thead>
<tr>
<th>a. Limitations:</th>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
</table>
| (1) The use of good flare design and limiting number of startup and shut down cycles to 35 per 12 contiguous month period to meet BACT. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats] | (1) Stack Parameters. These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.  
(a) The stack height shall be at least 150.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]  
(b) The stack inside diameter at the outlet may not exceed 6.0 feet. [s. 285.65(3), Stats., s. NR 406.10, Wis. Adm. Code]  
(2) The flare shall be operated at all times when the IGCC unit is operating. [s. 285.65(3), Wis. Stats.]  
(3) The permittee shall limit the number of startup and shut down cycles to 35 per 12 contiguous month period. [s. NR 405.08(2), Wis. Adm. Code]  
(4) The permittee shall install and operate a temperature monitoring and continuous recording system to ensure that the flare is operating. [s. NR 405.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.] | (1) The permittee shall retain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]  
(2) The permittee shall record the number of startup and shut downs to demonstrate compliance with condition LKK.1.b.(3). [s. NR 439.06(1), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]  
(3) The permittee shall record date and time the flare was inoperable for each event the flare was inoperable. [s. 285.65(3), Wis. Stats.] |
### KK. S43, P43 – Gasifier Flare

#### Pollutant: 2 Visible Emissions

**a. Limitations:** 0% opacity or number 1 on the Ringlemann chart. See Note 1 [s. NR 431.05, Wis. Adm. Code, s. NR 405.08, Wis. Adm. Code, s. 285.65(13), Wis. Stats., s. NR 440.18(3)(a), Wis. Adm. Code]

**b. Compliance Demonstration:**

(1) Compliance emission tests to demonstrate compliance with the visible emission limit shall be conducted within 180 days after the start of the initial operation. [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

(1) Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(9)(a)1., Wis. Adm. Code]

---

**Note 1:** S. NR 440.18(3)(a), Wis. Adm. Code requires flares to be designed and operated with no visible emissions as determined by the methods specified in s. NR 440.18(6), Wis. Adm. Code except for periods not to exceed a total of five minutes during any 2 consecutive hours.
b. Limitations: (1) The emissions may not exceed 0.007 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.020 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.207(4)(c), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

b. Compliance Demonstration:
   (1) Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.43 [s. NR 439.07, Wis. Adm. Code]
   (2) The permittee shall determine the hourly emissions using fuel consumption records and emissions factor determined by stack testing. [s. 285.65(3), Wis. Stats.]
   (3) Stack Parameters: These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
      (a) The stack height shall be at least 140.0 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
      (b) The stack inside diameter at the outlet may not exceed 4.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
   (4) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
   (5) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
   (6) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.1.a. (4). [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:
   (1) Reference Test Method for Particulate Matter Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60 and US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]
   (2) The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]
   (3) The permittee shall keep records on the heat input used as required in condition I.LL.1.b.(6). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
   (4) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
   (5) The permittee shall record information on the maintenance required in condition I.LL.1.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

Note 1: The IGCC auxiliary boiler is subject to NSPS requirements for particulate matter (PM) under s. NR 440.207(4)(c), Wis. Adm. Code. The only New Source Performance Standards (NSPS) standard that will be applicable to the boiler for PM is in the form of an opacity standard when fuel oil is fired per s. NR 440.207(4)(c), Wis. Adm. Code.

43 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
**LL. S44, B44 – IGCC Auxiliary Boiler**

| Pollutant: 2. Particulate Matter Emissions less than 10 microns (PM$_{10}$) |
| Limitations: (1) The emissions may not exceed 0.007 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.020 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] |

### b. Compliance Demonstration:

1. Initial compliance emission tests shall be conducted within 180 days after the start of operation of the process to show compliance with the emission limitation.44 [s. NR 439.07, Wis. Adm. Code]

2. The permittee shall determine the hourly emissions using fuel consumption records and emissions factor determined by stack testing. [s. 285.65(3), Wis. Stats.]

3. **Stack Parameters** These requirements are included because the source was reviewed with these stack parameters and it was determined that no increments or ambient air quality standards will be violated when constructed as proposed.
   - (a) The stack height shall be at least 140 feet above ground level. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]
   - (b) The stack inside diameter at the outlet may not exceed 4.0 feet. [s. 285.65(3), Wis. Stats., s. NR 406.10, Wis. Adm. Code]

4. The permittee shall fire natural gas and/or fuel having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

5. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

6. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.2.a. (4). [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:

1. **Reference Test Method for Particulate Matter Emissions:** Whenever compliance emission testing is required, US EPA Method 5, including backhalf (Method 202) shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

2. The permittee shall keep and maintain on site technical drawings, blueprints or equivalent records of the physical stack parameters. [s. NR 439.04(1)(d), Wis. Adm. Code]

3. The permittee shall keep records on the heat input used as required in condition I.LL.2.b.(6). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

4. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

5. The permittee shall record information on the maintenance required in condition I.LL.2.b.(5). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

---

44 If the compliance emission tests cannot be conducted within 180 days after the start of initial operation, the permit holder may request and the Department may approve, in writing, an extension of time to conduct the test(s).
### LL. S44, B44 – IGCC Auxiliary Boiler

**Pollutant:** 3. Sulfur Dioxide

#### a. Limitations:
1. The emissions may not exceed 0.0012 pound per million Btu when firing natural gas. (BACT); 
2. The emissions may not exceed 0.0032 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); 
3. The use of good combustion practices. (BACT); 
4. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months.  

   [s. NR 405.08(2), Wis. Adm. Code, s. NR 440.207(3)(d), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

#### b. Compliance Demonstration:

1. The permittee shall determine the hourly emissions using fuel consumption records, fuel sulfur content and vendor provided or AP-42 emission factors.  
   [s. 285.65(3), Wis. Stats.]

2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit.  
   [s. NR 405.08(2), Wis. Adm. Code]

3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit.  
   [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

4. A representative sample shall be taken from each fuel lot of fuel oil received. The sample shall be analyzed by the permittee for the sulfur content by weight using procedures outline in s. NR 439.08(2), Wis. Adm. Code and the analysis shall be retained by the permittee for a period of at least five years.  
   [s. 285.65(3), Wis. Stats.]

5. The Department will accept, in lieu of an analysis on each fuel lot under (4) above, an analysis of a representative sample of the fuel lot of distillate fuel oil from which the fuel lot was taken.  
   [s. 285.65(3), Wis. Stats., s. NR 440.207(5)(h), Wis. Adm. Code]

#### c. Test Methods, Recordkeeping, and Monitoring:

1. Reference Test Method for Sulfur Dioxide Emissions: Whenever compliance emission testing is required, US EPA Method 6, 6A or 6C shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used.  
   [s. NR 439.06(2), Wis. Adm. Code]

2. The permittee shall keep records on the heat input used as required in condition I.LL.3.b.(8).  
   [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities.  
   [s. NR 439.04(1)(d), Wis. Adm. Code]

4. The permittee shall record information on the maintenance required in condition I.LL.3.b.(3).  
   [s. NR 439.04(1)(a)6, Wis. Adm. Code]

5. The permittee shall keep records required under condition I.LL.3.b.(4) – (7).  
   [s. NR 439.04(1)(d), Wis. Adm. Code]

6. The permittee shall comply with the NSPS reporting and recordkeeping requirements per s. NR 440.207(9), Wis. Adm. Code. A copy of these requirements attached with the permit.  
   [s. 285.65(3), Wis. Stats.]

7. The permittee shall keep records of the fuel supplier certification. The certification shall include the following information:  
   1. For distillate oil:  
      a. The name of the oil supplier; and  
      b. A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in s. NR 440.207(2)(g), Wis. Adm. Code  
   [s. 285.65(3), Wis. Stats., s. NR 440.207(9)(f), Wis. Adm. Code]

---

**Note 1:** The New Source Performance Standard (NSPS) for sulfur dioxide in s. NR 440.207(3) (d), Wis. Adm. Code will be applicable to the IGCC auxiliary boiler only when fuel oil is fired and is 0.50 pound per million Btu heat input or combust oil having a sulfur content of 0.5 percent by weight. The BACT emission limit for sulfur dioxide is more restrictive then the NSPS limit for sulfur dioxide, thus the IGCC auxiliary boiler is expected to meet the NSPS limit for sulfur dioxide.
### LL. S44, B44 – IGCC Auxiliary Boiler

**Pollutant:** 3. Sulfur Dioxide (continued)

<table>
<thead>
<tr>
<th>b. Compliance Demonstration:</th>
<th>c. Test Methods, Recordkeeping, and Monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(6) The permittee shall retain copies of its distillate fuel oil supplier’s fuel sulfur and heat content analyses at the facility for each fuel lot of distillate fuel oil received pursuant to 40 CFR 60.334 for a period of five years. [s. NR 439.04(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(7) The permittee shall further obtain certification from the fuel supplier that the applicable methods in s. NR 439.08(2), Wis. Adm. Code, were followed, if applicable, by the supplier in the preparation of said sulfur and heat content analyses. The fuel lot’s quantity of fuel oil shall be included with the copies of these analyses. The fuel supplier certification shall include the information identified in condition I.LL.3.c.(7). [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
<tr>
<td>(8) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.3.a. (4). [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
Pollutant: 4. Oxides of Nitrogen (NOx)

a. Limitations: (1) The emissions may not exceed 0.050 pound per million Btu when firing natural gas based on a 30-day rolling average. (BACT); (2) The emissions may not exceed 0.090 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight oil based on a 30-day rolling average. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. NR 428.04(2)(a)2., and 3., Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.] See Note 1

b. Compliance Demonstration:
(1) The permittee shall determine the hourly emissions using fuel consumption record and vendors or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]

(2) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

(4) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.4.a. (4). [s. 285.65(3), Wis. Stats.]

c. Test Methods, Recordkeeping, and Monitoring:
(1) Reference Test Method for Nitrogen Oxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR 60, US EPA Method 7 or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(6), Wis. Adm. Code]

(2) The permittee shall keep records on the heat input used as required in condition I.LL.4.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

(4) The permittee shall record information on the maintenance required in condition I.LL.4.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

(5) The permittee shall comply with the general and specific monitoring requirements under s. NR 428.04(3)(a) and (b), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(3), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(6) The permittee shall comply with all the recordkeeping and reporting requirements under s. NR 428.04(4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(4), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(7) The permittee shall comply with all the requirements for monitoring, installation, certification, data accounting, compliance dates and reporting data prior to initial certification as required under s. NR 428.07(1)(b), Wis. Adm. Code, s. NR 428.07(2)(b)2, Wis. Adm. Code, s. NR 428.07(3), Wis. Adm. Code. [s. 285.65(3), Wis. Stats.]

(8) The permittee shall monitor NOx and heat input per s. NR 428.08(1)(a), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.08, Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

(9) The permittee shall submit quarterly reports per s. NR 428.09(1), (3) and (4), Wis. Adm. Code. A copy of these requirements attached with the permit. [s. NR 428.04(9), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]

Note 1: The IGCC auxiliary boiler is subject to NOx emission limits per s. NR 428.04(2)(a)2. and 3., Wis. Adm. Code and is 0.05 pounds per million Btu of heat input when firing natural gas and 0.09 pounds per million Btu of heat input when firing fuel oil. The BACT limit for NOx is more restrictive than the emission limit for NOx under s. NR 428.04, Wis. Adm. Code, thus the IGCC auxiliary boiler is expected to meet the emission limits for NOx under s. NR 428.04, Wis. Adm. Code.
**LL. S44, B44 – IGCC Auxiliary Boiler**

**Pollutant:** 5. Carbon Monoxide

### a. Limitations:
1. The emissions may not exceed 0.045 pound per million Btu when firing natural gas based on a 30-day rolling average. (BACT)
2. The emissions may not exceed 0.045 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight based on a 30-day rolling average. (BACT)
3. The use of good combustion practices. (BACT)
4. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

### b. Compliance Demonstration:
1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 factor or vendor provided emissions factor [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.5.a. (4). [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Carbon Monoxide Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, Appendix A, US EPA Method 10, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(4), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.LL.5.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.LL.5.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
**Pollutant:** 6. Volatile Organic Compounds (VOC)

**(a) Limitations:**
1. The emissions may not exceed 0.0060 pound per million Btu when firing natural gas based on a 30-day rolling average.
2. The emissions may not exceed 0.0020 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight based on a 30-day rolling average.
3. The use of good combustion practices.
4. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 408.04, Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**(b) Compliance Demonstration:**
1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor or vendor provided emission factors. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet LAER emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.6.a. (4). [s. 285.65(3), Wis. Stats.]

**(c) Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for VOC Emissions: Whenever compliance emission testing is required, test procedures in 40 CFR Part 60, US EPA Method 25 or 18, or an alternate method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(3), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.LL.6.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.LL.6.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
**Pollutant:** 7. Lead Emissions

**a. Limitations:** (1) The emissions may not exceed 0.000000024 pound per million Btu when firing natural gas. (BACT); (2) The emissions may not exceed 0.000009 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT); (3) The use of good combustion practices. (BACT); (4) The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**

1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]

2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]

3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]

4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.7.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**

1. Reference Test Method for Lead Emissions: Whenever compliance emission testing is required, US EPA Method 12 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(1), Wis. Adm. Code]

2. The permittee shall keep records on the heat input used as required in condition I.LL.7.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]

3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

4. The permittee shall record information on the maintenance required in condition I.LL.7.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
**Pollutant:** 8. Mercury Emissions

### a. Limitations:
1. The emissions may not exceed 0.00000026 pound per million Btu when firing natural gas. (BACT)
2. The emissions may not exceed 0.000003 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT)
3. The use of good combustion practices. (BACT)
4. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

### b. Compliance Demonstration:
1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.8.a. (4). [s. 285.65(3), Wis. Stats.]

### c. Test Methods, Recordkeeping, and Monitoring:
1. Reference Test Method for Mercury Emissions: Whenever compliance emission testing is required, US EPA Method 29 or an alternative method approved in writing by the department shall be used to demonstrate compliance. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.LL.8.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.LL.8.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]
### Pollutant: 9. Emissions of Fluorides

**a. Limitations:**
1. The emissions may not exceed 0.0000990 pound per million Btu when firing natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. (BACT)
2. The use of good combustion practices. (BACT)
3. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
1. The permittee shall determine the hourly emissions using fuel consumption records and AP-42 emissions factor. [s. 285.65(3), Wis. Stats.]
2. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
3. The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler and (b) A list of items that will be checked and maintained and their frequency, to ensure that the boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]
4. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.9.a. (3). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for Emissions of Fluorides: Whenever compliance emission testing is required, US EPA Method 13B shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.LL.9.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall record information on the maintenance required in condition I.LL.9.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]

### Pollutant: 10. Visible Emissions

**a. Limitations:**
20% opacity or number 1 on the Ringlemann chart. [s. NR 431.05, Wis. Adm. Code, s. NR 440.207(4)(c), Wis. Adm. Code]

**b. Compliance Demonstration:**
1. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
2. The permittee shall conduct an initial test as required under s. NR 440.08, Wis. Adm. Code using the procedures and reference method in 40 CFR part 60, Appendix A, which is incorporated by reference in s. NR 440.17, Wis. Adm. Code. [s. NR 440.207(4)(c), Wis. Adm. Code]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for Visible Emissions: Whenever compliance emission testing is required, US EPA Method 9 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(9)(a)1., Wis. Adm. Code]
2. The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]

Note 1: Any gases emitted from the stack when the unit is fired with fuel oil shall not have an opacity greater than 20% (6 minutes average). The exception is one 6-minute period per hour when the opacity not exceeding 27%. The opacity standard does not apply during periods of start up and shut down or malfunction.
<table>
<thead>
<tr>
<th><strong>Pollutant:</strong> Hazardous air pollutants (inorganic solid HAPs, inorganic acid HAPs, Organic HAPs) regulated under sec. 112 of the Clean Air Act.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Limitations:</strong> (1) The permittee shall use natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight and comply with the PM/PM10 limits to meet case by case MACT for inorganic solid HAPs; (2) The permittee shall use natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight to comply with the case by case MACT limits for inorganic acid HAPs; (3) The permittee shall comply with and meet the VOC LAER emission limits to comply with case by case MACT for organic HAPs and (4) The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. 285.65(13), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>b. Compliance Demonstration:</strong></td>
</tr>
<tr>
<td>(1) The permittee shall determine the hourly emissions using fuel consumption records and EPRI provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet MACT emission limit. [s. 285.65(13), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the boiler; and (b) A list of items that will be checked and maintained and their frequency, to ensure that boiler is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. [s. 285.65(3), Wis. Stats., s. 285.65(10), Wis. Stats.]</td>
</tr>
<tr>
<td>(4) The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.11.a. (4). [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td><strong>c. Test Methods, Recordkeeping, and Monitoring:</strong></td>
</tr>
<tr>
<td>(1) Reference Test Method for organic HAPs Emissions; inorganic solid HAPs, and inorganic acid HAPs; Whenever compliance emission testing is required a method approved in writing by the Department shall be used to demonstrate compliance. [s. NR 439.06(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall keep records on the heat input used as required in condition I.LL.11.b.(4). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(3) The permittee shall keep retain on site, plans and specifications that indicate the process’s fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The permittee shall record information on the maintenance required in condition I.LL.11.b.(3). [s. NR 439.04(1)(a)6, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
**Pollutant**: 12. Sulfuric Acid Mist

**a. Limitations:**
1. The emissions may not exceed 0.00024 pound per million Btu when firing natural gas. (BACT);
2. The emissions may not exceed 0.00064 pound per million Btu when firing fuel oil having a maximum sulfur content of 0.003% by weight. (BACT);
3. The use of good combustion practices. (BACT);
4. The total heat input may not exceed 198,000 mmBtu in any 12 consecutive months, of which no more than 49,500 mmBtu may be from the combustion of fuel oil in any 12 consecutive months. [s. NR 405.08(2), Wis. Adm. Code, s. 285.65(3), Wis. Stats., s. 285.65(7), Wis. Stats.]

**b. Compliance Demonstration:**
1. The permittee shall fire natural gas and/or fuel oil having a maximum sulfur content of 0.003% by weight. This condition is established to meet BACT emission limit. [s. NR 405.08(2), Wis. Adm. Code]
2. The permittee shall determine the hourly emissions using fuel consumption records, and vendor provided or AP-42 emission factors. [s. 285.65(3), Wis. Stats.]
3. The permittee shall keep daily records of the type and amount of fuel fired in the boiler and shall calculate heat input to the unit on a daily basis. The heat input used records shall be compiled on an annual basis to show compliance with I.LL.12.a. (4). [s. 285.65(3), Wis. Stats.]

**c. Test Methods, Recordkeeping, and Monitoring:**
1. Reference Test Method for Sulfur Acid Mist Emissions: Whenever compliance emission testing is required, US EPA Method 8 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. [s. NR 439.06(8), Wis. Adm. Code]
2. The permittee shall keep records on the heat input used as required in condition I.LL.12.b.(3). [s. 285.65(10), Wis. Stats., s. 285.65(3), Wis. Stats.]
3. The permittee shall keep retain on site, plans and specifications that indicate the process's fuel design capabilities. [s. NR 439.04(1)(d), Wis. Adm. Code]
4. The permittee shall keep records required under condition I.LL.3.b.(4) – (7) to demonstrate compliance with the sulfur content in the fuel. [s. NR 439.04(1)(d), Wis. Adm. Code, s. 285.65(3), Wis. Stats.]
MM. T16 – SCPC Boiler Fuel Oil Storage Tank (500,000 gallons), T118 – IGCC Fuel Oil Storage Tank (300,000 gallons), T121 – Diesel Gen. #1 Fuel Oil Storage Tank (5,000 gallons), T122 – Diesel Gen. #2 Fuel Oil Storage Tank (5,000 gallons), T123 - Fire Pump Fuel oil Storage Tank (1,000 gallon), T119, T120 – Two IGCC Sulfuric Acid Storage Tanks

The following emission limits apply to each storage tanks, T16, T118, T121, T122, T123.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Limitation</th>
<th>Compliance Monitoring</th>
</tr>
</thead>
</table>
| 1. Volatile Organic Compounds (VOC) | **a. Limitations:** (1) Use of a carbon bed absorption system or its equivalent on each fuel oil storage tanks to meet LAER control requirements. (LAER); (2) 90% reduction in VOC emissions. (LAER) | *(Note 1)*  
| | *(b. Compliance Demonstration):* | *(c. Test Methods, Recordkeeping, and Monitoring):*  
| | (1) The permittee shall provide the following information to the Department at least four months prior to the expiration of the construction permit to demonstrate compliance with good combustion practices: (a) A copy of the original equipment manufacturer (OEM) procedures that should be followed to maintain the carbon bed; and (b) A list of items that will be checked and maintained and their frequency, to ensure that carbon bed is operating properly. This information will be used by the Department to establish appropriate permit conditions in the operation permit. | (1) Reference test Method for Volatile Organic Compound Emissions: Whenever compliance emission testing is required, the appropriate US EPA Method 25 or 18 shall be used to demonstrate compliance or an alternate method approved in writing by the Department, shall be used. |
| | | (2) The permittee shall record information on the maintenance required in condition I.MM.1.b.(1). | *(Note 1)*  
| | | (3) The permittee shall retain records of the determined maximum true vapor pressure. |

*(Note 1): The standards of performance for a new sources under s. NR 440.285, Wis. Adm. Code apply to all new petroleum storage tanks which are larger than 40 cubic meters (10,600 gallons). Therefore, the new SCPC boiler and IGCC fuel oil storage tanks are subject to the requirements of s. NR 440.285. However the performance standards under this section apply to tanks storing organic liquids with a maximum true vapor pressure greater than 5.2 kPa (0.74 psia). The fuel oil has a maximum true vapor pressure of 0.035 kPa (0.005 psia). As a result, although the SCPC boiler and IGCC fuel oil storage tanks are subject to the performance standards under s. NR 440.285, Wis. Adm. Code there are no applicable NSPS standards for these tanks.*
**NN. OTHER CONDITIONS APPLICABLE TO THE ENTIRE FACILITY**

<table>
<thead>
<tr>
<th>Condition Type:</th>
<th>1. Construction Permit Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a. Conditions:</strong></td>
<td></td>
</tr>
<tr>
<td>(1) <strong>Construction Notification:</strong> The permittee shall inform the Wisconsin Department of Natural Resources, Southeast Region, 2300 North Dr. Martin Luther King Jr. Drive, Milwaukee, WI 53212, Phone (414) 263-8500, in writing of the following for the emissions unit covered in this permit:</td>
<td></td>
</tr>
<tr>
<td>(a) Notice of commencing construction shall be submitted within 15 days of the start of construction.</td>
<td></td>
</tr>
<tr>
<td>(b) Notice of intent to initially operate the source(s) covered by this permit, 30 days prior to the anticipated date of initial operation.</td>
<td></td>
</tr>
<tr>
<td>(c) Notice of the actual date of initial startup shall be submitted within 15 days of the initial startup.</td>
<td></td>
</tr>
<tr>
<td>[s. NR 439.03(1), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(2) <strong>Construction Permit Expiration:</strong> This construction permit expires 90 months after the date of issuance. Construction or modification and an initial operation period for equipment shakedown, testing and Department evaluation of operation to assure conformity with the permit conditions is authorized for each emissions unit covered in this permit. Please note that the sources covered by this permit are required to meet all emission limits and conditions contained in the permit at all times, including during the initial operation period.</td>
<td></td>
</tr>
<tr>
<td>(a) <strong>Reevaluating BACT:</strong> The permittee shall submit information for reevaluating BACT to the Department at least 18 months prior to the commencement of construction of any permitted processes that may have not begun construction within eighteen months from the date of the issuance of the final permit. [ss. 285.60(1)(a)2 and 285.66(1), Wis. Stats.; s. NR 406.12, Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) <strong>Completion of Operation Permit Application:</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Compliance information required to complete the operation permit application for the emission units included in this permit should be submitted to the DNR at least 4 months prior to the expiration of the Construction Permit.</td>
<td></td>
</tr>
<tr>
<td>(b) Operation of the source(s) covered by this permit after this permit expires is prohibited unless a complete operating permit application for the source(s) has been submitted to the Department.</td>
<td></td>
</tr>
<tr>
<td>[s. 285.60(1)(b)1., Wis. Stats.; s. NR 407.04(1)(b), Wis. Adm. Code]</td>
<td></td>
</tr>
<tr>
<td>(3) This permit supersedes permit #02-RV-054. [s. 285.65(3), Wis. Stats.]</td>
<td></td>
</tr>
</tbody>
</table>
NN. OTHER CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

Condition Type: 2. Malfunction Prevention and Abatement Plans

<table>
<thead>
<tr>
<th>a. Conditions:</th>
<th>b. Compliance Demonstration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) A malfunction prevention and abatement plan shall be prepared and followed for the plant. [s. NR 439.11, Wis. Adm. Code]</td>
<td>(1) The plan shall be developed to prevent, detect and correct malfunctions or equipment failures which may cause any applicable emissions limitation to be violated or which may cause air pollution. [s. NR 439.11(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) A written copy of the plan shall be kept at the plant and shall be updated once every five years. [s. NR 439.11(1), Wis. Adm. Code]</td>
<td>(2) This plan shall include installation, maintenance and routine calibration procedures for the control equipment instrumentation. This plan shall require an instrumentation calibration at the frequency specified by the manufacturer but not less than once per year plus an inspection and/or calibration whenever instrumentation anomalies are noted. [ss. NR 407.09(1)(c)1.c., NR 439.055(4) and s. NR 439.11, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) All air pollution control equipment shall be operated and maintained in conformance with good engineering practices (i.e. operated and maintained according to manufacturer's specifications and directions) to minimize the possibility for the exceedance of any emission limitations [s. NR 439.11(4), Wis. Adm. Code]</td>
<td>(3) The plan shall require a copy of the operation and maintenance manual for the control equipment be maintained on site. The plan shall contain all of the elements in s. NR 439.11(1)(a) - (h), Wis. Adm. Code. [s. NR 439.11, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(4) The facility shall maintain an inventory of normal consumable items necessary to ensure operation of the control device(s) in conformance with the manufacturer's specifications and recommendations. [s. NR 439.11, Wis. Adm. Code]</td>
<td>(4) The facility shall maintain records of the instrumentation calibrations. [s. NR 439.04, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>

NN. OTHER CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

Condition Type: 3. Stack Testing Requirements

<table>
<thead>
<tr>
<th>a. Conditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) All testing shall be performed with the emissions unit operating at capacity or as close to capacity as practicable and in accordance with approved procedures. If operation at capacity is not feasible, the source shall operate at a capacity level, which is approved by the Department in writing. [s. NR 439.07(1), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) If the testing for the sources is not completed in the time frame identified in this permit then the permittee shall request an extension upto 60 days to complete the testing. [s. 285.65(3), Wis. Stats.]</td>
</tr>
<tr>
<td>(2) The Department shall be informed at least 20 working days prior to any stack testing so a Department representative can witness the testing. At the time of notification a compliance emission test plan shall also be submitted to the Department for approval. When approved in writing, an equivalent test method may be substituted for the reference test method. [s. NR 439.07(2), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(3) Two copies of the report on the tests shall be submitted to the Department for evaluation within 60 days following the tests. [s. NR 439.07(9), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
## NN. OTHER CONDITIONS APPLICABLE TO THE ENTIRE FACILITY

**Condition Type:** 4. Acid Rain Requirements

### a. Conditions:

1. The permittee shall obtain and secure allowances equal to the actual annual SO2 emissions. (Allowances are available through the Chicago Board of Trade and other sources) [40 CFR Parts 72 and 75, s. NR 409.06(3), Wis. Adm. Code]

2. The permittee shall have a Designated Representative (DR) in accordance with 40 CFR Part 72. The DR shall be responsible for submitting required permits, compliance plans and emission monitoring reports, allowance plans and compliance certifications; and will be the responsible official with regards to all matters under the acid rain program. [40 CFR Part 72 and 75, s. NR 409.07, Wis. Adm. Code]

3. The permittee shall submit a Phase II acid rain permit to the Department at least 24 months before the date on which the unit commences operation. [s. 285.65(3), Wis. Stats., s. NR 409.08(1), Wis. Adm. Code]

4. The owner or operator of a Phase I and phase II acid rain units shall install, calibrate, operate and maintain all monitoring equipment necessary for continuously monitoring sulfur dioxide, nitrogen oxides, carbon dioxide, stack flow rate and opacity. The type of monitoring equipment used and the manner and location of its installation are subject to prior department approval. [s. NR 439.095(1), Wis. Adm. Code]

5. The owner or operator of monitoring equipment installed to comply with condition 1.NN.4.a.(4) shall install, calibrate, maintain and operate the continuous emission monitor in accordance with the performance specifications in 40 CFR part 60, Appendix B or, for affected units, the performance specifications in 40 CFR part 75, Appendices A to I, incorporated by reference in s. NR 484.04(21) and (27), and the requirements in s. NR 439.09. The owner or operator of the source shall submit a quality control and quality assurance plan for approval by the department. The monitor shall follow the plan, as approved by the department. [s. NR 439.095(6), Wis. Adm. Code]
**NN. OTHER CONDITIONS APPLICABLE TO THE ENTIRE FACILITY**

**Condition Type:** 5. Compliance Reports / Records

<table>
<thead>
<tr>
<th>a. Conditions:</th>
<th>b. Compliance Demonstration:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Upon issuance of the operation permit, the permittee shall submit periodic monitoring reports.</td>
<td>(1) Submit a monitoring report, which contains the results of monitoring or a summary of</td>
</tr>
<tr>
<td>[s. NR 407.09(1)(c)3., Wis. Adm. Code]</td>
<td>monitoring results required by this permit to the Department every 6 months.</td>
</tr>
<tr>
<td>(2) Upon issuance of the operation permit, the permittee shall submit periodic certification of</td>
<td>(a) The time periods to be addressed by the submittal are January 1 to June 30 and July 1 to</td>
</tr>
<tr>
<td>(3) The records required under this permit shall be retained for at least five(5) years and shall</td>
<td>(b) The report shall be submitted to the Wisconsin Department of Natural Resources, Southeast</td>
</tr>
<tr>
<td>be made available to department personnel upon request during normal business hours. [s. NR 439.04,</td>
<td>Region, 2300 North Dr. Martin Luther King Jr. Drive, Milwaukee, WI 53212, Phone (414) 263-8500</td>
</tr>
<tr>
<td>s. NR 439.05, Wis. Adm. Code]</td>
<td>within 30 days after the end of each reporting period.</td>
</tr>
<tr>
<td></td>
<td>(c) All deviations from and violations of applicable requirements shall be clearly identified</td>
</tr>
<tr>
<td></td>
<td>in the submittal.</td>
</tr>
<tr>
<td></td>
<td>(d) Each submittal shall be certified by a responsible official as to the truth, accuracy</td>
</tr>
<tr>
<td></td>
<td>and completeness of the report.</td>
</tr>
<tr>
<td></td>
<td>(e) The content of the submittal is described in item D. of Part II of the operation permit.</td>
</tr>
<tr>
<td></td>
<td>[s. NR 439.03(1)(b), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>[s. NR 439.03(1)(c), Wis. Adm. Code]</td>
</tr>
<tr>
<td></td>
<td>(2) Submit an annual, certification of compliance with the requirements of this permit to the</td>
</tr>
<tr>
<td></td>
<td>Wisconsin Department of Natural Resources, Southeast Region, 2300 North Dr. Martin Luther</td>
</tr>
<tr>
<td></td>
<td>King Jr. Drive, Milwaukee, WI 53212, Phone (414) 263-8500 and to Compliance Data - Wisconsin,</td>
</tr>
<tr>
<td></td>
<td>Air and Radiation Division, U.S. EPA, 77 W. Jackson, Chicago, IL 60604].</td>
</tr>
<tr>
<td></td>
<td>(a) The time period to be addressed by the report is the January 1 to December 31 period</td>
</tr>
<tr>
<td></td>
<td>which precedes the report.</td>
</tr>
<tr>
<td></td>
<td>(b) The report shall be submitted to the Wisconsin Department of Natural Resources, Southeast</td>
</tr>
<tr>
<td></td>
<td>Region, 2300 North Dr. Martin Luther King Jr. Drive, Milwaukee, WI 53212, Phone (414) 263-8500</td>
</tr>
<tr>
<td></td>
<td>and U.S. EPA within 30 days after the end of each reporting period.</td>
</tr>
<tr>
<td></td>
<td>(c) The information included in the report shall comply with the requirements of Part II</td>
</tr>
<tr>
<td></td>
<td>Section N of this permit.</td>
</tr>
<tr>
<td></td>
<td>(d) Each report shall be certified by a responsible official as to the truth, accuracy and</td>
</tr>
<tr>
<td></td>
<td>completeness of the report.</td>
</tr>
<tr>
<td></td>
<td>[s. NR 439.03(1)(c), Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
### Condition Type: 6. Acquisition of Emission offsets

<table>
<thead>
<tr>
<th>Conditions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) The permittee shall obtain Volatile Organic Compound offsets at a minimum ratio or 1.3 or a total of 294 credit. [s. NR 408.06(4)(d), Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee will ensure that the actual transfer of credits has taken place prior to commencing operation of the power plant. [s. NR 405.06, Wis. Adm. Code]</td>
</tr>
<tr>
<td>(2) The permittee shall provide information on whether actual transfer of credits has occurred prior to commencing operation of the ERGS’s project to the DNR, Bureau of Air Management, 101 S. Webster Street, P.O. Box 7921, Madison, WI 53707. [s. 285.65(3), Wis. Stats., s. NR 408.06, Wis. Adm. Code]</td>
</tr>
</tbody>
</table>
APPENDIX B

Lists of Pulverized Coal-Fired Boilers
## Coal-Fired Utility PSD Projects

<table>
<thead>
<tr>
<th>Company</th>
<th>City (County)</th>
<th>General Project Description</th>
<th>Audited Data (MMBtu/hr)</th>
<th>Date of Application</th>
<th>Project Completion (MMBtu/hr)</th>
<th>Actual Construction Start Date</th>
<th>BACT/PSD Start Date</th>
<th>BACT/LABR (10G) Control Techniques</th>
<th>Ambient Emission Increases (TPY)</th>
<th>Emission Control Efficiencies</th>
<th>Permit Address</th>
<th>Permit Type</th>
<th>Permit Status</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEP</td>
<td>Columbus</td>
<td>Annual Project to replace coal fired generators</td>
<td>1,636 lb/hr for SO2, 506 lb/hr for NOx, 631-3276 lb/hr for CO</td>
<td>6/19-99</td>
<td>1,636 lb/hr for SO2, 506 lb/hr for NOx, 631-3276 lb/hr for CO</td>
<td>21-Jun-05</td>
<td>290</td>
<td>NOx-LNB+OFA+SCR, SO2-Dry Scrubber, PM/PM10-Baghouse, CO-GCP, VOC-GCP, fluorides-Dry Scrubber+Baghouse, SAM-Dry Scrubber+Baghouse, Hg-Baghouse, Pb-Baghouse</td>
<td>NOx 1.84 TPY, CO, 1300 TPY, PM10@.012 lb/mmbtu, Hg Based on monthly calculation per NSPS Subpart Da</td>
<td>145 TPY H2SO4 @.003 lb/mmbtu</td>
<td>Bill Andrews, P.E.</td>
<td>Review</td>
<td>Preliminary Permit Issued July 06</td>
<td>This Project is under appeal.</td>
</tr>
<tr>
<td>AES</td>
<td>Beaver Valley</td>
<td>AES proposes to install a new 2,155MMBTU/HR CFB boiler and at the same time retire four existing pulverized coal boilers. This new configuration will generate approximate 180 MW, compared to the current 125 MW.</td>
<td>1900 TPY <a href="mailto:SO2@.156lb">SO2@.156lb</a>/mmbtu</td>
<td>24-Dec-03</td>
<td>1900 TPY <a href="mailto:SO2@.156lb">SO2@.156lb</a>/mmbtu</td>
<td>21-Jun-05</td>
<td>290</td>
<td>NOx-LNB+OFA+SCR, SO2-Dry Scrubber, PM/PM10-Baghouse, CO-GCP, VOC-GCP, fluorides-Dry Scrubber+Baghouse, SAM-Dry Scrubber+Baghouse, Hg-Baghouse, Pb-Baghouse</td>
<td>NOx 1.84 TPY, CO, 1300 TPY, PM10@.012 lb/mmbtu, Hg Based on monthly calculation per NSPS Subpart Da</td>
<td>145 TPY H2SO4 @.003 lb/mmbtu</td>
<td>Andrews, P.E.</td>
<td>Review</td>
<td>Preliminary Permit Issued July 06</td>
<td>This Project is under appeal.</td>
</tr>
<tr>
<td>AES</td>
<td>Pennsylvania</td>
<td>AES proposes to construct a 600 megawatt power plant near Pennsylvania.</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>14-Oct-04</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>21-Jun-05</td>
<td>290</td>
<td>NOx-LNB+OFA+SCR, SO2-Dry Scrubber, PM/PM10-Baghouse, CO-GCP, VOC-GCP, fluorides-Dry Scrubber+Baghouse, SAM-Dry Scrubber+Baghouse, Hg-Baghouse, Pb-Baghouse</td>
<td>NOx 1.84 TPY, CO, 1300 TPY, PM10@.012 lb/mmbtu, Hg Based on monthly calculation per NSPS Subpart Da</td>
<td>145 TPY H2SO4 @.003 lb/mmbtu</td>
<td>Andrews, P.E.</td>
<td>Review</td>
<td>Preliminary Permit Issued July 06</td>
<td>This Project is under appeal.</td>
</tr>
<tr>
<td>AES</td>
<td>Pennsylvania</td>
<td>AES proposes to construct a 600 megawatt power plant near Pennsylvania.</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>14-Oct-04</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>21-Jun-05</td>
<td>290</td>
<td>NOx-LNB+OFA+SCR, SO2-Dry Scrubber, PM/PM10-Baghouse, CO-GCP, VOC-GCP, fluorides-Dry Scrubber+Baghouse, SAM-Dry Scrubber+Baghouse, Hg-Baghouse, Pb-Baghouse</td>
<td>NOx 1.84 TPY, CO, 1300 TPY, PM10@.012 lb/mmbtu, Hg Based on monthly calculation per NSPS Subpart Da</td>
<td>145 TPY H2SO4 @.003 lb/mmbtu</td>
<td>Andrews, P.E.</td>
<td>Review</td>
<td>Preliminary Permit Issued July 06</td>
<td>This Project is under appeal.</td>
</tr>
<tr>
<td>AES</td>
<td>Pennsylvania</td>
<td>AES proposes to construct a 600 megawatt power plant near Pennsylvania.</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>14-Oct-04</td>
<td>2500 TPY NOx, NOx-0.08 lb/MMBtu, SO2 - 0.15lb/MMBtu, CO-0.15 lb/mmbtu</td>
<td>21-Jun-05</td>
<td>290</td>
<td>NOx-LNB+OFA+SCR, SO2-Dry Scrubber, PM/PM10-Baghouse, CO-GCP, VOC-GCP, fluorides-Dry Scrubber+Baghouse, SAM-Dry Scrubber+Baghouse, Hg-Baghouse, Pb-Baghouse</td>
<td>NOx 1.84 TPY, CO, 1300 TPY, PM10@.012 lb/mmbtu, Hg Based on monthly calculation per NSPS Subpart Da</td>
<td>145 TPY H2SO4 @.003 lb/mmbtu</td>
<td>Andrews, P.E.</td>
<td>Review</td>
<td>Preliminary Permit Issued July 06</td>
<td>This Project is under appeal.</td>
</tr>
<tr>
<td>Company</td>
<td>City (County)</td>
<td>General Project Description</td>
<td>Certified Capacity (MWe)</td>
<td>Date of Certification (MM/DD/YY)</td>
<td>Date Permit Issued (MM/DD/YY)</td>
<td>Permit Application Date (MM/DD/YY)</td>
<td>Project Control Authority</td>
<td>Project Control Contact Information</td>
<td>Project Category</td>
<td>Notes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
<td>----------------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------</td>
<td>------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calla Energy</td>
<td>Minnesota</td>
<td>Construct 2 new pulverized coal boilers: 500 each</td>
<td></td>
<td>Aug 20 2000</td>
<td>06/28/00</td>
<td>01/07/00</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minnesota Power &amp; Chemical</td>
<td>Minnesota</td>
<td>Construct 2 new pulverized coal boilers: 500 each</td>
<td></td>
<td>Aug 20 2000</td>
<td>06/28/00</td>
<td>01/07/00</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enviropower</td>
<td>Illinois</td>
<td>Construct 2 new pulverized coal boilers: 500 each</td>
<td></td>
<td>Aug 20 2000</td>
<td>06/28/00</td>
<td>01/07/00</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinois Enviropower</td>
<td>Illinois</td>
<td>Construct 2 new pulverized coal boilers: 500 each</td>
<td></td>
<td>Aug 20 2000</td>
<td>06/28/00</td>
<td>01/07/00</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky Cash Creek Generation</td>
<td>Kentucky</td>
<td>Construct IGCC facility with 2 combustion turbines</td>
<td>677 MWe</td>
<td>Jul 13, 2001</td>
<td>05/31/01</td>
<td>12/31/00</td>
<td>EAB</td>
<td>Steve Dillert</td>
<td></td>
<td>project is under review for compliance with Endangered Species Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky East Kentucky Power</td>
<td>Kentucky</td>
<td>Construct 1 new circulating fluidized bed boiler</td>
<td>300 MWe</td>
<td>Sept 13, 2004</td>
<td>09/09/04</td>
<td>02/18/05</td>
<td>EAB</td>
<td>Steve Dillert</td>
<td></td>
<td>project is under review for compliance with Endangered Species Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky Estill County Energy</td>
<td>Kentucky</td>
<td>Construct 1 new circulating fluidized bed boiler</td>
<td>500 MWe</td>
<td>Aug 15, 2000</td>
<td>08/14/00</td>
<td>04/25/01</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kentucky Louisville Gas &amp; Electric</td>
<td>Kentucky</td>
<td>Construct 1 new pulverized coal boiler: 750 MWe</td>
<td></td>
<td>Dec 1, 2004</td>
<td>12/03/04</td>
<td>02/17/06</td>
<td>EAB</td>
<td>Don Newell</td>
<td></td>
<td>expedition to draft permit conducted in accordance with Project Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean Energy Center</td>
<td>Illinois</td>
<td>Construct IGCC facility with 2 combustion turbines</td>
<td>660 MWe</td>
<td>Mar 21, 2002</td>
<td>03/20/02</td>
<td>12/4/01</td>
<td>EAB</td>
<td>Steve Dillert</td>
<td></td>
<td>project is under review for compliance with Endangered Species Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peabody Tennessee East Power</td>
<td>Kentucky</td>
<td>Construct 1 new pulverized coal boiler: 660 MWe</td>
<td></td>
<td>Aug 12, 2003</td>
<td>08/11/03</td>
<td>04/30/05</td>
<td>EAB</td>
<td>Steve Dillert</td>
<td></td>
<td>project is under review for compliance with Endangered Species Act.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
- Project Act is the federal law that requires a joint review of permits by the EPA, the Department of Energy, and the Federal Energy Regulatory Commission.
- Project Act permits are required for large coal-fired power plants.
- The information provided is based on publicly available sources and may not be comprehensive.
- EAB stands for the Environmental Protection Agency.
- Project Act permits are reviewed to ensure compliance with federal laws and regulations.
<table>
<thead>
<tr>
<th>Company</th>
<th>City/Country</th>
<th>General Project Description</th>
<th>Proposed Capacity</th>
<th>Project Status</th>
<th>Date of Application</th>
<th>Control Cost</th>
<th>BACT/LABR/102g Standards</th>
<th>BACT/LABR/102g Control Techniques</th>
<th>Fuel Source</th>
<th>Notes/References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisconsin DNR Raj Vakharia</td>
<td>Milwaukee</td>
<td>Construction of a 64 MW CFB fired boiler. Project will be located in the City of Milwaukee, Wisconsin, Manitowoc Public Utilities, Manitowoc Construction of a 64 MW CFB fired boiler.</td>
<td>64 MW</td>
<td>Proposed</td>
<td>17-Mar-03</td>
<td>6542</td>
<td>NOx: 3849, PM: 1272</td>
<td>FF, LNB, SCR</td>
<td>Coal, 65%</td>
<td>See <a href="http://www.dnr.state.wi.us/org/air/permits/APM_toc.htm#section_M">http://www.dnr.state.wi.us/org/air/permits/APM_toc.htm#section_M</a></td>
</tr>
<tr>
<td>Wisconsin Wisconsin Energy</td>
<td>Milwaukee Elm</td>
<td>Construction of a 660 MWe (6,500 mmBtu/hr) pulverized Powder River basin coal fired boiler. Project will be located in the City of Milwaukee, Wisconsin, Wisconsin Energy, Plum Pt. Power Sta.</td>
<td>660 MWe</td>
<td>Proposed</td>
<td>29-Jun-05</td>
<td>6380</td>
<td>NOx: 0.135, CO: 0.15</td>
<td>LNB/SCR, PM-10</td>
<td>Oil, 30%</td>
<td>New Roads-800-555-3500, for information on project, see <a href="http://desmoinesregister.com/news/stories/c4788998/16963218.html">http://desmoinesregister.com/news/stories/c4788998/16963218.html</a></td>
</tr>
<tr>
<td>Ohio Dominion Energy Ashtabula</td>
<td>Ashtabula</td>
<td>Construction of a 600 MW integrated gasification combined cycle unit. Project will be located in the City of Ashtabula, Ohio, Ohio Dominion Energy, Ashtabula 600, 08-Mar-04</td>
<td>600 MW</td>
<td>Proposed</td>
<td>27-Mar-04</td>
<td>3709</td>
<td>NOx: 2,300, VOC: 194</td>
<td>FF, LNB/SCR, SO2-564, VOC-194</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/org/air/permits/APM_toc.htm#section_M">http://www.dnr.state.wi.us/org/air/permits/APM_toc.htm#section_M</a></td>
</tr>
<tr>
<td>Montana Montana Power</td>
<td>Missoula</td>
<td>Construction of a 1200 MW CFB fired boiler. Project will be located in the City of Missoula, Montana, Montana Power, Missoula 1200, 07-Jul-06</td>
<td>1200 MW</td>
<td>Proposed</td>
<td>18-Oct-05</td>
<td>4556</td>
<td>NOx: 0.11, CO: 0.135</td>
<td>FF, LNB/SCR, PM-10</td>
<td>Coal, 65%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Colorado Power &amp; Light</td>
<td>Oak Creek</td>
<td>Construction of a 320 MW gasifier. Project will be located in the City of Oak Creek, Colorado, Colorado Power &amp; Light, Oak Creek 320, 07-Jul-06</td>
<td>320 MW</td>
<td>Proposed</td>
<td>20-Aug-06</td>
<td>2004</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>California Pacific Gas</td>
<td>San Antonio</td>
<td>Construction of a 660 MW combined cycle unit. Project will be located in the City of San Antonio, California, Pacific Gas, San Antonio, Calaveras Lake Station, 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>27-Aug-05</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Oklahoma Windstream</td>
<td>Oklahoma</td>
<td>Construction of a 660 MW windfarm. Project will be located in the City of Oklahoma, Oklahoma, Windstream, Ft. Gibson, 07-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>12-Sep-06</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>New Mexico Public Service of San Antonio, Calaveras Lake Station</td>
<td>San Antonio</td>
<td>Construction of a 660 MW combined cycle unit. Project will be located in the City of San Antonio, Texas, Public Service of San Antonio, Calaveras Lake Station, 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>27-Aug-05</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Texas City Public Service of San Antonio, Calaveras Lake Station</td>
<td>San Antonio</td>
<td>Construction of a 660 MW combined cycle unit. Project will be located in the City of San Antonio, Texas, Public Service of San Antonio, Calaveras Lake Station, 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>27-Aug-05</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Kansas River Energy Corp.</td>
<td>Kansas City</td>
<td>Construction of a 660 MW coal-fired boiler. Project will be located in the City of Kansas City, Kansas, Kansas River Energy Corp., Kansas City, 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>12-Sep-06</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Midwest Energy, Plum Pt. Power Sta.</td>
<td>Milwaukee</td>
<td>Construction of a 660 MW combined cycle unit. Project will be located in the City of Milwaukee, Wisconsin, Midwest Energy, Plum Pt. Power Sta., 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>12-Sep-06</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Windstream</td>
<td>Fort Worth</td>
<td>Construction of a 320 MW windfarm. Project will be located in the City of Fort Worth, Texas, Windstream, Fort Worth, 03-Sep-06</td>
<td>320 MW</td>
<td>Proposed</td>
<td>22-Oct-06</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Nevada Pacific Gas</td>
<td>Las Vegas</td>
<td>Construction of a 660 MW combined cycle unit. Project will be located in the City of Las Vegas, Nevada, Pacific Gas, Las Vegas, 08-Aug-06</td>
<td>660 MW</td>
<td>Proposed</td>
<td>12-Sep-06</td>
<td>4935</td>
<td>NOx: 0.059, CO: 0.15</td>
<td>FF, LNB, SCR, SO2-564</td>
<td>Gas, 80%</td>
<td>See <a href="http://www.dnr.state.wi.us/permitstoc.htm#section_M">http://www.dnr.state.wi.us/permitstoc.htm#section_M</a></td>
</tr>
<tr>
<td>Company</td>
<td>City (County)</td>
<td>General Project Description</td>
<td>Status</td>
<td>Project Title</td>
<td>Issuance Date</td>
<td>Date of Application</td>
<td>BACT/ LBC Limits (lb/MMBtu)</td>
<td>BACT/LBC Controls and Techniques</td>
<td>BACT/LBC Control Techniques</td>
<td>BACT/LBC Cost</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------------</td>
<td>---------------</td>
<td>---------------------</td>
<td>---------------------------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>South Dakota</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wyoming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utah</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana Rocky Mountain Power Inc.</td>
<td>Helena</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wyoming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utah</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montana</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Coal-Fired Utility PSD Projects

<table>
<thead>
<tr>
<th>Company</th>
<th>City (County)</th>
<th>General Project Description</th>
<th>Rated Capacity (MWe)</th>
<th>Date of Application</th>
<th>Date of Regional Permit Issuance</th>
<th>Date of Construction Commence</th>
<th>Actual Construction Commence Date</th>
<th>Operational Start Date</th>
<th>BACT/LAER &amp; 112(g) Standards</th>
<th>BACT/LAER &amp; 112(g) Control Techniques</th>
<th>Permitting Authority</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Seal Power</td>
<td>Westmoreland, PA</td>
<td>Sithe Global - Springville Station</td>
<td>1450</td>
<td>None submitted</td>
<td>01-Jan-04</td>
<td>01-Feb-04</td>
<td>09-Feb-04</td>
<td>09-May-04</td>
<td>NOx - 3,315</td>
<td>CO - 5,526</td>
<td>PM10 - 1,105</td>
<td>SO2 - 3,315</td>
</tr>
<tr>
<td>New Mexico Electric Power Co-op</td>
<td>Cloudcroft, NM</td>
<td>Sithe Global - New Mexico Energy Facility</td>
<td>1100</td>
<td>None submitted</td>
<td>01-Jul-04</td>
<td>01-Jul-04</td>
<td>01-Jul-04</td>
<td>01-Jul-04</td>
<td>NOx - 3,315</td>
<td>CO - 5,526</td>
<td>PM10 - 1,105</td>
<td>SO2 - 3,315</td>
</tr>
<tr>
<td>Portland General Electric</td>
<td>Portland, OR</td>
<td>Sithe Global - Portland General Energy Center</td>
<td>2500</td>
<td>None submitted</td>
<td>01-Oct-04</td>
<td>01-Oct-04</td>
<td>01-Oct-04</td>
<td>01-Oct-04</td>
<td>NOx - 3,315</td>
<td>CO - 5,526</td>
<td>PM10 - 1,105</td>
<td>SO2 - 3,315</td>
</tr>
<tr>
<td>Idaho undetermined</td>
<td>Idaho Falls (Bannock County)</td>
<td>Idaho Southeast Idaho Energy</td>
<td>520</td>
<td>None submitted</td>
<td>01-Jan-07</td>
<td>01-Jan-10</td>
<td>IDEQ / EPA</td>
<td>Mike Simon</td>
<td>NOx - 0.06 lb/MMBTU</td>
<td>CO - 0.14 lb/MMBTU</td>
<td>PM10 - 0.02 lb/MMBTU</td>
<td>SO2 - 0.06 lb/MMBTU</td>
</tr>
<tr>
<td>Alaska Arctic Slope Regional Development and Export Authority</td>
<td>Point Lay (North Slope Borough)</td>
<td>Alaska Arctic Slope Regional Development and Export Authority</td>
<td>50</td>
<td>None submitted</td>
<td>IDEQ</td>
<td>IDEQ</td>
<td>Mike Simon</td>
<td>NOx - 0.06 lb/MMBTU</td>
<td>CO - 0.14 lb/MMBTU</td>
<td>PM10 - 0.02 lb/MMBTU</td>
<td>SO2 - 0.06 lb/MMBTU</td>
<td>VOC - 0.03 lb/MMBTU</td>
</tr>
<tr>
<td>Arizona Unisource Energy</td>
<td>Tucson, AZ</td>
<td>Desert Rock Energy Center</td>
<td>360</td>
<td>None submitted</td>
<td>05-May-05</td>
<td>05-May-05</td>
<td>05-May-05</td>
<td>05-May-05</td>
<td>NOx - 3,315</td>
<td>CO - 5,526</td>
<td>PM10 - 1,105</td>
<td>SO2 - 3,315</td>
</tr>
</tbody>
</table>

**Note:** Information on pending projects and developments is provided by the respective utility companies and may change over time. For the most current information, please visit the official websites or contact the companies directly.
APPENDIX C

RBLC Query Results
## Facility Information

**RBLC ID:** AR-0074 (final)  
**Date Determination Last Updated:** 3/2/2004  
**Corporate/Company Name:** PLUM POINT ASSOCIATES, LLC  
**Permit Number:** 1995-AOP-R0  
**Facility Name:** PLUM POINT ENERGY  
**Permit Date:** 08/20/2003 (actual)  
**Facility Contact:** D. BLAKE WHEATLEY  636-532-2200  
**EPA Region:** 6  
**Facility State:** AR  
**Other Permitting Information:** The FACILITY IS A SINGLE PULVERIZED COAL FIRED BOILER. BETWEEN 550 AND 800 MW.

### Process/Pollutant Information

#### PROCESS NAME: BOILER, UNIT 1 - SN-01
- **Process Type:** 11.110 (Coal (includes bituminous, subbituminous, anthracite, and lignite))
- **Primary Fuel:** SUB-BITUMINOUS COAL
- **Throughput:** 880.00 MW
- **Process Notes:** THE BOILER IS A 550-800 MW PULVERIZED COAL FIRED BOILER.
- **POLLUTANT NAME:** PM10  
  - **CAS Number:** PM  
  - **Emission Limit 1:** 0.0180 LB/MMBTU  
  - **Control Method:** BACT/PSD
- **Control Method:**
  - (A) DRY FLUE GAS DESULFURIZATION
- **Pollutant/Compliance Notes:** Est. % Efficiency: 90%

#### PROCESS NAME: COOLING TOWER, SN-03
- **Process Type:** 99.009 (Industrial Process Cooling Towers)
- **Throughput:** 970.00 MMBTU/H
- **Process Notes:**
  - (A) DRY FGD/FABRIC FILTER
- **Pollutant/Compliance Notes:**
  - Emission Limit 1: 0.0001 LB/MMBTU
  - % efficiency is 90% control by weight

#### PROCESS NAME: AUXILIARY BOILER
- **Process Type:** 12.220 (Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))
- **Primary Fuel:** #2 FUEL OIL
- **Throughput:** 175.00 MMBTU/H
- **POLLUTANT NAME:** PM10  
  - **CAS Number:** PM  
  - **Emission Limit 1:** 0.4000 TYR  
  - **Standard Emission:** 0.0071 LB/MMBTU  
  - **Control Method:** BACT/PSD
- **Control Method:**
  - (P) LOW ASH FUEL
- **Pollutant/Compliance Notes:**
  - Emission Limit 1: 2.3000 TYR
  - Standard Emission: 0.0510 LB/MMBTU
  - Control Method: (P) LOW SULFUR FUEL OIL

#### PROCESS NAME: VOC
- **Process Type:** 4911
- **Pollutant/Compliance Notes:**
  - Emission Limit 1: 0.1000 TYR
  - Standard Emission: 0.0015 LB/MMBTU
  - Control Method: (P) COMBUSTION CONTROLS
<table>
<thead>
<tr>
<th>Pollutant Name</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>1.6000 T/YR</td>
<td>0.0360 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) COMBUSTION CONTROLS</td>
</tr>
<tr>
<td>NOX</td>
<td>10102</td>
<td>4.4000 T/YR</td>
<td>0.0360 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) LOW NOX BURNERS WITH FLUE GAS RECIRCULATION</td>
</tr>
<tr>
<td>H2SO4</td>
<td>7664-93-9</td>
<td>0.0300 T/YR</td>
<td>0.0008 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) LOW SULFUR FUEL OIL</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**Process Name**: MATERIAL HANDLING, COAL, PARTIALLY INCLOSED

- **Process Type**: 90.011 [Coal Handling/Processing/Preparation/Cleaning]
- **Process Notes**: These sources consist of barge unloading and coal transfer conveyors.
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.1000 LB/H
- **Emission Limit 2**: 0.4000 LB/H
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (A) PARTIAL ENCLOSURES

**Pollutant/Compliance Notes**: Stackout conveyors 1 & 3, barge unloading, reclaim conveyors 1 & 2, reclaim transfer - limit is 0.1 lb/h. Stackout conveyors 2 - limit is 0.4 lb/h; stackout transfer - limit is 0.2 lb/h.

**Process/Pollutant Information**

**Process Name**: MATERIAL HANDLING, COAL, BAGHOUSES

- **Process Type**: 90.011 [Coal Handling/Processing/Preparation/Cleaning]
- **Process Notes**: Process covers transfer house, tripper deck conveyor, reclaim transfer #3.
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.1000 LB/H
- **Emission Limit 2**: 1.2000 LB/H
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (A) BAGHOUSE

**Pollutant/Compliance Notes**: Rail car unloading - limit is 0.1 lb/h; active coal piles - limit is 1.2 lb/h, and inactive coal piles, and pile transfer - limit is 0.5 lb/h.

**Process/Pollutant Information**

**Process Name**: MATERIAL HANDLING, FLY ASH, BAGHOUSES

- **Process Type**: 99.120 [Ash Storage, Handling, Disposal]
- **Process Notes**: Fly ash silos, rail and barge transport, pneumatic transfer
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.1000 LB/H
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (A) BAGHOUSE

**Process/Pollutant Information**

**Process Name**: MATERIAL HANDLING, LIME, BAGHOUSES

- **Process Type**: 90.019 [Lime/Limestone Handling/Kilns/Storage/Manufacturing]
- **Process Notes**: Lime storage, controlled by baghouse
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.1000 LB/H
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (A) BAGHOUSE

**Process/Pollutant Information**

**Process Name**: MATERIAL HANDLING, FLY ASH, SUPPRESSION

- **Process Type**: 99.120 [Ash Storage, Handling, Disposal]
- **Process Notes**: Fly ash transfer and disposal
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.1000 LB/H ash transfer
- **Emission Limit 2**: 0.6000 LB/H ash disposal area
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (P) DUST SUPPRESSION - WATER SPRAYS

**Process/Pollutant Information**

**Process Name**: ROAD DUST

- **Process Type**: 99.190 [Other Fugitive Dust Sources]
- **Process Notes**: Paved and unpaved roads
- **Pollutant Name**: PM10
- **CAS Number**: PM
- **Emission Limit 1**: 0.2000 LB/H paved roads
- **Emission Limit 2**: 0.3000 LB/H unpaved roads
- **Case-by-Case Basis**: BACT-PSD
- **Control Method**: (P) DUST SUPPRESSION - WATERING, DUST SUPPRESSANTS
Facility Information

- **RBLC ID:** IA-0067 (final)
- **Date Determination Last Updated:** 3/10/2004
- **Corporate/Company Name:** MIDAMERICAN ENERGY COMPANY
- **Permit Number:** PROJECT 02-528
- **FMIS ID:** FRS Number: 1.1E+11
- **Facility Name:** MIDAMERICAN ENERGY COMPANY
- **Permit Date:** 06/17/2003 (actual)
- **Facility State:** IA
- **Facility Contact:** CHAD A. TEPLY  (712) 366-5316  CATEPLY@MIDAMERICAN.COM
- **Permit Issued By:** IOWA DEPARTMENT OF NATURAL RESOURCES (Agency Name)

Process/Pollutant Information

- **PROCESS NAME:** CBEC 4 BOILER & 3 CARBON SILOS
- **Process Type:** 11.110  (Coal (includes bituminous, subbituminous, anthracite, and lignite))
- **Primary Fuel:** PRB COAL
- **Throughput:** 7675.00 MMBTUHR
- **Process Notes:** The emissions from three activated carbon silos are vented through the same stack as the main boiler.

<table>
<thead>
<tr>
<th>POLLUTANT NAME</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
<th>Est. % Efficiency</th>
<th>Pollutant/Compliance Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0270 LBS/MMBTU</td>
<td>0.0270 LBS/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) BAGHOUSE</td>
<td>99.7</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
<td>0.0250 LBS/MMBTU</td>
<td>0.0250 LBS/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) BAGHOUSE</td>
<td>98.2</td>
<td>Pollutant/Compliance Notes: BACT limit includes condensables.</td>
</tr>
<tr>
<td>SO2</td>
<td>7446-09-5</td>
<td>0.1000 LBS/MMBTU</td>
<td>0.1000 LBS/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) BAGHOUSE</td>
<td>92</td>
<td>Pollutant/Compliance Notes: The 30 day rolling average BACT limit does not include startup, shutdown, or malfunction emissions. The ton/yr limit includes all emissions including startup, shutdown, and malfunction.</td>
</tr>
<tr>
<td>NOX</td>
<td>10102</td>
<td>0.0065 LBS/MMBTU</td>
<td>0.0065 LBS/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) LIME SPRAY DRYER FLUE GAS DESULFURIZATION</td>
<td>80</td>
<td>Pollutant/Compliance Notes: The 30 day rolling average BACT limit does not include emissions from startup, shutdown, or malfunction. The ton/yr limit includes all emissions including startup, shutdown, and malfunction.</td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>0.0036 LBS/MMBTU</td>
<td>0.0036 LBS/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) COMBUSTION CONTROLS</td>
<td>13 control options were reviewed</td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td>7439-92-1</td>
<td>2.6000 E-5 LBS/MMBTU</td>
<td></td>
<td>BACT-PSD</td>
<td>(A) BAGHOUSE</td>
<td>99</td>
<td>Pollutant/Compliance Notes: BACT limit is 0.000026 LBS/MMBTU and not 0. Costs are the same as those for PM &amp; PM10. The cost effectiveness was not calculated for Pb.</td>
</tr>
<tr>
<td>F</td>
<td>7782-41-4</td>
<td>0.0009 LBS/MMBTU</td>
<td></td>
<td>BACT-PSD</td>
<td>(A) LIME SPRAY DRYER FLUE GAS DESULFURIZATION</td>
<td>95</td>
<td>Pollutant/Compliance Notes: Cost data is same as that for SO2. The cost effectiveness for F was not calculated.</td>
</tr>
</tbody>
</table>
**POLLUTANT NAME:** TRS  
**CAS Number:** 7704

**Emission Limit 1:** 0.0010 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Pollutant/Compliance Notes:** Costs are the same as those for SO2. Cost effectiveness was not calculated.

**POLLUTANT NAME:** H2SO4 MIST  
**CAS Number:** 7664-93-9

**Emission Limit 1:** 0.0042 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Pollutant/Compliance Notes:** Costs are the same as those for SO2. Cost effectiveness was not calculated.

**POLLUTANT NAME:** HG  
**CAS Number:** 7439-97-6

**Emission Limit 1:** 0 LB/MMBTU  
**Case-by-Case Basis:** MACT

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** HCL  
**CAS Number:** 7647-01-0

**Emission Limit 1:** 0.0029 LB/MMBTU  
**Case-by-Case Basis:** MACT

**Pollutant/Compliance Notes:**

**POLLUTANT NAME:** PM FILTERABLE  
**CAS Number:** PM

**Emission Limit 1:** 0.1800 LB/MMBTU  
**Case-by-Case Basis:** MACT

**Other Applicable Requirements:**

**Pollutant/Compliance Notes:**

**PROCESS NAME:** Haul Roads  
**Process Type:** 99.140 (Paved Roads)

**Throughput:** 46.00 TRUCKS/DAY  
**POLLUTANT NAME:** PM  
**CAS Number:** PM

**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Est. % Efficiency:** 83

**Pollutant/Compliance Notes:**

**PROCESS NAME:** Stackers conveyor  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**POLLUTANT NAME:** PM  
**CAS Number:** PM

**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Est. % Efficiency:** 95

**Pollutant/Compliance Notes:**

**PROCESS NAME:** Transfer to Active Pile  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**POLLUTANT NAME:** PM  
**CAS Number:** PM

**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Est. % Efficiency:** 95

**Pollutant/Compliance Notes:**

**PROCESS NAME:** Bucket Reclama  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**POLLUTANT NAME:** PM  
**CAS Number:** PM

**Case-by-Case Basis:** BACT-PSD  
**Control Method:** BACT-PSD  
**Est. % Efficiency:** 95

**Pollutant/Compliance Notes:**
POLLUTANT NAME: PM10
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 95

Process/Pollutant Information
PROCESS NAME: RAIL UNLOADING
Process Type: 90.011 (Coal Handling/Processing/Preparation/Cleaning)
Throughput: 311155.00 SQ FT
POLLUTANT NAME: PM
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 95
POLLUTANT NAME: PM10
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 95

Process/Pollutant Information
PROCESS NAME: ACTIVE COAL PILE
Process Type: 90.011 (Coal Handling/Processing/Preparation/Cleaning)
Throughput: 1196459.00 SQ FT
POLLUTANT NAME: PM
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: 99% is the requirement when the pile is inactive. 95% is required for maintenance of the pile.
POLLUTANT NAME: PM10
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: 99% is the requirement when the pile is inactive. 95% is required for maintenance of the pile.

Process/Pollutant Information
PROCESS NAME: INACTIVE COAL STORAGE PILE
Process Type: 90.011 (Coal Handling/Processing/Preparation/Cleaning)
Throughput: 28224.00 SQ FT
POLLUTANT NAME: PM
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: 99% is the requirement when the pile is inactive. 95% is required for maintenance of the pile.
POLLUTANT NAME: PM10
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: 99% is the requirement when the pile is inactive. 95% is required for maintenance of the pile.

Process/Pollutant Information
PROCESS NAME: RAIL UNLOADING COAL STOCKOUT PILE
Process Type: 90.011 (Coal Handling/Processing/Preparation/Cleaning)
Throughput: 429.40 MMBTU/HR
POLLUTANT NAME: PM
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: Emission limit includes condensible PM.
POLLUTANT NAME: PM10
CAS Number: PM
Case-by-Case Basis: BACT-PSD
Control Method: (P) CHEMICAL DUST SUPPRESSANT
Est. % Efficiency: 99
Pollutant/Compliance Notes: Limit is “no visible emissions”

Process/Pollutant Information
PROCESS NAME: AUXILIARY BOILER
Process Type: 11.310 (Natural Gas (includes propane and liquefied petroleum gas))
Primary Fuel: NATURAL GAS
Throughput: 429.40 MMBTU/HR
Process Notes: The unit is limited to 876 hrs/yr.
POLLUTANT NAME: PM
CAS Number: PM
Emission Limit 1: 0.0076 LB/MMBTU
Standard Emission: 0.0076 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES
Pollutant/Compliance Notes: Emission limit includes condensible PM.
POLLUTANT NAME: PM10
CAS Number: PM
Emission Limit 1: 0.0076 LB/MMBTU
Standard Emission: 0.0076 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES
Pollutant/Compliance Notes: Emission limit includes condensible PM.
POLLUTANT NAME: VE
CAS Number: VE
Emission Limit 1: 0 % OPACITY See pollutant notes
Standard Emission: 0 % OPACITY See pollutant notes
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES
Pollutant/Compliance Notes: Limit is “no visible emissions”
<table>
<thead>
<tr>
<th>POLLUTANT NAME</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
<th>Pollutant/Compliance Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2</td>
<td>7446-09-5</td>
<td>0.0006 LB/MMBTU</td>
<td>0.0006 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>NOX</td>
<td>10102</td>
<td>0.1400 LB/MMBTU</td>
<td>0.1400 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>4897-14-0</td>
<td>0.0055 LB/MMBTU</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>0.0840 LB/MMBTU</td>
<td>400.00 PPMV @ 3%O2</td>
<td>BACT-PSD</td>
<td>(P) LOW NOX BURNERS</td>
<td></td>
</tr>
<tr>
<td>POB</td>
<td>7439-92-1</td>
<td>5.0000 x 10^-7</td>
<td></td>
<td></td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>1050.00 MG/L</td>
<td>1050.00 MG/L</td>
<td>BACT-PSD</td>
<td>(P) MIST ELIMINATORS</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
<td>1050.00 MG/L</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) MIST ELIMINATORS</td>
<td></td>
</tr>
<tr>
<td>VE</td>
<td>VE</td>
<td>0 % OPACTY</td>
<td></td>
<td></td>
<td>(P) MIST ELIMINATOR</td>
<td>BACT limit is “no visible emissions”</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**COOLING TOWER**
- Process Type: Industrial Process Cooling Towers
- Throughput: 344000.00 GALLONS/ MINUTE
- Pollutant Name: PM
- Emission Limit 1: 1050.0000 MGL maximum TDS (total dissolved solids)
- Case-by-Case Basis: BACT-PSD
- Control Method: (A) MIST ELIMINATORS
- Est. Efficiency: 0.001

**EMERGENCY GENERATOR**
- Process Type: Fuel Oil
- Throughput: 97.73 GAL/HR
- Pollutant Name: PM
- Emission Limit 1: 1050.0000 MGL maximum TDS (total dissolved solids)
- Standard Emission: 0 % OPACTY
- Case-by-Case Basis: BACT-PSD
- Control Method: (P) GOOD COMBUSTION PRACTICES
- Pollutant/Compliance Notes: Limit includes condensible PM.
POLLUTANT NAME: NOX  CAS Number: 10102
Emission Limit 1: 1.7100 LB/MMBTU
Emission Limit 2: 5.7200 TONS/YR 12 month rolling total
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: VOC  CAS Number: VOC
Emission Limit 1: 0.0900 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: CO  CAS Number: 630-08-0
Emission Limit 1: 0.8500 LB/MMBTU
Emission Limit 2: 2.8500 TONS/YR 12 month rolling total
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.0050 GR/DSCF average of 3 test runs
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: PM10  CAS Number: PM
Emission Limit 1: 0.0050 GR/DSCF average of 3 stack test runs
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: VE  CAS Number: VE
Emission Limit 1: 5.0000 % OPACITY 1-hr average
Standard Emission: 5.0000 % OPACITY 1-hr average
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: SO2  CAS Number: 7446-09-5
Emission Limit 1: 0.0520 LB/MMBTU
Emission Limit 2: 0.0500 TONS/YR 12 month rolling total
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: NOX  CAS Number: 10102
Emission Limit 1: 4.4100 LB/MMBTU
Emission Limit 2: 4.2000 TONS/YR 12 month rolling total
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: VOC  CAS Number: VOC
Emission Limit 1: 0.3500 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: CO  CAS Number: 630-08-0
Emission Limit 1: 0.9500 LB/MMBTU
Emission Limit 2: 0.9000 TONS/YR 12 month rolling total
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.2100 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: PM10  CAS Number: PM
Emission Limit 1: 0.2100 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

POLLUTANT NAME: VE  CAS Number: VE
Emission Limit 1: 20.0000 % OPACITY 6 minute average
Standard Emission: 20.0000 % OPACITY 6 minute average
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES AND LOW SULFUR FUEL

Pollutant/Compliance Notes:
- Also limited to fuel with a maximum sulfur content of 0.05%

Control Method:
- (P) GOOD COMBUSTION PRACTICES

**Process/Pollutant Information**

**PROCESS NAME:** DIESEL FIRE PUMP
**Process Type:** 17.210 [Fuel Oil]
**Primary Fuel:** DIESEL FUEL
**Throughput:** 27.80 GAL/HR
**Process Notes:** Limit is rated at 500 hp

**POLLUTANT NAME:** PM  CAS Number: PM
**Emission Limit 1:** 0.3100 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** PM10  CAS Number: PM
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** VE  CAS Number: VE
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average
**Standard Emission:** 5.0000 % OPACITY 1-hr average
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) BAGHOUSE

**POLLUTANT NAME:** SO2  CAS Number: 7446-09-5
**Emission Limit 1:** 0.0520 LB/MMBTU
**Emission Limit 2:** 0.0500 TONS/YR 12 month rolling total
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** NOX  CAS Number: 10102
**Emission Limit 1:** 4.4100 LB/MMBTU
**Emission Limit 2:** 4.2000 TONS/YR 12 month rolling total
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** VOC  CAS Number: VOC
**Emission Limit 1:** 0.0900 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** CO  CAS Number: 630-08-0
**Emission Limit 1:** 0.8500 LB/MMBTU
**Emission Limit 2:** 2.8500 TONS/YR 12 month rolling total
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** PM  CAS Number: PM
**Emission Limit 1:** 0.3100 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** PM10  CAS Number: PM
**Emission Limit 1:** 0.8500 LB/MMBTU
**Emission Limit 2:** 2.8500 TONS/YR 12 month rolling total
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD COMBUSTION PRACTICES

**POLLUTANT NAME:** VE  CAS Number: VE
**Emission Limit 1:** 20.0000 % OPACITY 6 minute average
**Standard Emission:** 20.0000 % OPACITY 6 minute average
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) BAGHOUSE

**Process/Pollutant Information**

**PROCESS NAME:** FLYASH/FGD WASTE VACUUM SYSTEM EXHAUSTER
**Process Type:** 99.120 [Ash Storage, Handling, Disposal]
**Throughput:** 44.44 TONS/HR
**Process Notes:** There are 3 units of the same type with this project. They are all the same size and have the same limits.

**POLLUTANT NAME:** PM  CAS Number: PM
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) BAGHOUSE

**POLLUTANT NAME:** PM10  CAS Number: PM
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 stack test runs
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) BAGHOUSE

**POLLUTANT NAME:** VE  CAS Number: VE
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average
**Standard Emission:** 5.0000 % OPACITY 1-hr average
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) BAGHOUSE
**Process/Pollutant Information**

**PROCESS NAME:** FLYASH/FGD WASTE STORAGE SILO

**Process Type:** Ash Storage, Handling, Disposal

**Throughput:** 2000.00 TONS

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** PM10

**CAS Number:** PM

**Emission Limit 1:** 0.0050 GR/DSCF

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** VE

**CAS Number:** VE

**Emission Limit 1:** 5.0000 % OPACITY 1-hr average

**Standard Emission:** 5.0000 % OPACITY 1-hr average

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Process/Pollutant Information**

**PROCESS NAME:** LIME STORAGE SILO

**Process Type:** Lime Storage, Handling, Disposal

**Throughput:** 2000.00 TONS/HR

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** PM10

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** VE

**CAS Number:** VE

**Emission Limit 1:** 5.0000 % OPACITY 1-hr average

**Standard Emission:** 5.0000 % OPACITY 1-hr average

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) VENT BAG FILTER

**Process/Pollutant Information**

**PROCESS NAME:** LIME FILTER SEPARATOR

**Process Type:** Lime Storage, Handling, Disposal

**Throughput:** 2000.00 TONS/HR

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) BAGHOUSE

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** PM10

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF average of 3 runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) BAGHOUSE

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** VE

**CAS Number:** VE

**Emission Limit 1:** 5.0000 % OPACITY 1-hr average

**Standard Emission:** 5.0000 % OPACITY 1-hr average

**Case-by-Case Basis:** Other Case-by-Case

**Control Method:** (A) BAGHOUSE

**Process/Pollutant Information**

**PROCESS NAME:** ROTARY CAR DUMPER

**Process Type:** Coal Handling/Processing/Preparation/Cleaning

**Throughput:** 3500.00 TONS/HR

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) BAGHOUSE

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** PM10

**CAS Number:** PM

**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) BAGHOUSE

**Pollutant/Compliance Notes:** Limit includes condensible PM

**POLLUTANT NAME:** VE

**CAS Number:** VE

**Emission Limit 1:** 5.0000 % OPACITY 1-hr average

**Standard Emission:** 5.0000 % OPACITY 1-hr average

**Case-by-Case Basis:** Other Case-by-Case

**Control Method:** (A) BAGHOUSE

Page 8
## Process/Pollutant Information

**PROCESS NAME:** TRANSFER CONVEYING BAY  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)  
**Throughput:** 1800.00 TONS/HR  
**POLLUTANT NAME:** PM  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**Pollutant/Compliance Notes:** Limit includes condensible PM  
**POLLUTANT NAME:** PM10  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**POLLUTANT NAME:** VE  
**CAS Number:** VE  
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average  
**Standard Emission:** 5.0000 % OPACITY 1-hr average  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE

---

**PROCESS NAME:** TRANSFER HOUSE 2  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)  
**Throughput:** 3500.00 TONS/HR  
**POLLUTANT NAME:** PM  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**Pollutant/Compliance Notes:** Limit includes condensible PM  
**POLLUTANT NAME:** PM10  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**POLLUTANT NAME:** VE  
**CAS Number:** VE  
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average  
**Standard Emission:** 5.0000 % OPACITY 1-hr average  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE

---

**PROCESS NAME:** TRANSFER HOUSE 4  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)  
**Throughput:** 3600.00 TONS/HR  
**POLLUTANT NAME:** PM  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**Pollutant/Compliance Notes:** Limit includes condensible PM  
**POLLUTANT NAME:** PM10  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**POLLUTANT NAME:** VE  
**CAS Number:** VE  
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average  
**Standard Emission:** 5.0000 % OPACITY 1-hr average  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE

---

**PROCESS NAME:** SLOWS  
**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)  
**Throughput:** 900.00 TONS/HR  
**Process Notes:** The throughput is based on the load-in rate. There are 6 silos (3 east & 3 west). Each silo is 900 tons/hr. The 3 east silos vent through 1 stack and the 3 west silos vent through one stack. Each stack has the same control and same BACT emission rates.  
**POLLUTANT NAME:** PM  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**Pollutant/Compliance Notes:** Limit includes condensible PM  
**POLLUTANT NAME:** PM10  
**CAS Number:** PM  
**Emission Limit 1:** 0.0050 GR/DSCF average of 3 test runs  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE  
**POLLUTANT NAME:** VE  
**CAS Number:** VE  
**Emission Limit 1:** 5.0000 % OPACITY 1-hr average  
**Standard Emission:** 5.0000 % OPACITY 1-hr average  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) BAGHOUSE
<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Throughput:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Standard Emission:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
</tbody>
</table>
### Facility Information

- **RBLC ID:** KS-0026  (final)
- **Corporate/Company Name:** SAND SAGE POWER, LLC
- **Facility Name:** HOLCOMB UNIT #2
- **Permit Number:** 0550087/C-3855
- **Date Determination Last Updated:** 1/16/2004
- **FRS Number:** 1.10017E+11
- **Permit Date:** 10/08/2002 (actual)
- **SIC Code:** 4911
- **NAICS:** 221112
- **EPA Region:** KS
- **Other Permitting Information:** 600 MW coal based power plant project planned to include a field test of "integrated combustion optimization system" — an array of state-of-the-art sensors, controls, & clean-burning combustion modifications, all linked by sophisticated neural network software.

### Process/Pollutant Information

<table>
<thead>
<tr>
<th>PROCESS NAME</th>
<th>Primary Fuel</th>
<th>Throughput</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Emission Limit 2</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
<th>Est. % Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILER, PULVERIZED COAL</td>
<td>Coal (includes bituminous, subbituminous, anthracite, and lignite)</td>
<td>660.00 MW</td>
<td></td>
<td>0.1200 LB/MMBTU initial 18 months</td>
<td>0.0800 LB/MMBTU after initial 18 months</td>
<td>0.0800 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(P) SCR, LOW NOX BURNERS, SEPARATED OVERFIRE AIR (SOFA)</td>
<td>70</td>
</tr>
<tr>
<td>SO2</td>
<td></td>
<td></td>
<td></td>
<td>0.1200 LB/MMBTU</td>
<td>0.1200 LB/MMBTU</td>
<td>0.1200 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(A) DRY FLUE GAS DESULFURIZATION</td>
<td>94</td>
</tr>
<tr>
<td>VOC</td>
<td></td>
<td></td>
<td></td>
<td>0.0035 LB/MMBTU</td>
<td>0.0035 LB/MMBTU</td>
<td>0.0035 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td>99.71</td>
</tr>
<tr>
<td>PM10</td>
<td></td>
<td></td>
<td></td>
<td>0.0180 LB/MMBTU</td>
<td>0.0180 LB/MMBTU</td>
<td>0.0180 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(A) DRY FABRIC FILTER</td>
<td>99.71</td>
</tr>
<tr>
<td>CO</td>
<td></td>
<td></td>
<td></td>
<td>0.1500 LB/MMBTU</td>
<td>0.1500 LB/MMBTU</td>
<td>0.1500 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td>99.71</td>
</tr>
</tbody>
</table>

- **Pollutant Name:** NOX
- **CAS Number:** 10102
- **Emission Limit 1:** 0.1200 LB/MMBTU initial 18 months
- **Emission Limit 2:** 0.0800 LB/MMBTU after initial 18 months
- **Standard Emission:** 0.0800 LB/MMBTU
- **Case-by-Case Basis:** Other Case-by-Case
- **Control Method:** (P) SCR, LOW NOX BURNERS, SEPARATED OVERFIRE AIR (SOFA)
- **Est. % Efficiency:** 70

- **Pollutant Name:** SO2
- **CAS Number:** 7446-09-5
- **Emission Limit 1:** 0.1200 LB/MMBTU
- **Standard Emission:** 0.1200 LB/MMBTU
- **Case-by-Case Basis:** Other Case-by-Case
- **Control Method:** (A) DRY FLUE GAS DESULFURIZATION
- **Est. % Efficiency:** 94

- **Pollutant Name:** VOC
- **CAS Number:** VOC
- **Emission Limit 1:** 0.0035 LB/MMBTU
- **Standard Emission:** 0.0035 LB/MMBTU
- **Case-by-Case Basis:** Other Case-by-Case
- **Control Method:** (P) GOOD COMBUSTION PRACTICES
- **Est. % Efficiency:** 99.71

- **Pollutant Name:** PM10
- **CAS Number:** PM
- **Emission Limit 1:** 0.0180 LB/MMBTU
- **Standard Emission:** 0.0180 LB/MMBTU
- **Case-by-Case Basis:** Other Case-by-Case
- **Control Method:** (A) DRY FABRIC FILTER
- **Est. % Efficiency:** 99.71

- **Pollutant Name:** CO
- **CAS Number:** 630-08-0
- **Emission Limit 1:** 0.1500 LB/MMBTU
- **Standard Emission:** 0.1500 LB/MMBTU
- **Case-by-Case Basis:** Other Case-by-Case
- **Control Method:** (P) GOOD COMBUSTION PRACTICES
- **Est. % Efficiency:** 99.71
Process/Pollutant Information

**PROCESS NAME:** BOILER, COAL
**Process Type:** (2)

**Primary Fuel:** COAL

**Throughput:** 7446.00 MMBTU/H

**Process Notes:** Pulverized coal fired boilers, throughput for each. No. 2 fuel oil or natural gas used for startup and stabilization

**POLLUTANT NAME:** PM
**CAS Number:** PM
**Emission Limit 1:** 0.0180 LB/MMBTU 3-h avg
**Standard Emission:** 0.0180 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) ESP, AND WET ELECTROSTATIC PRECIPITATOR (WESP)

**Est. % Efficiency:** 99

**POLLUTANT NAME:** VE
**CAS Number:** VE
**Emission Limit 1:** 20.0000 % OPACITY 6-min avg
**Emission Limit 2:** 27.0000 % OPACITY allowed for one 6 min period/
**Standard Emission:** 20.0000 % OPACITY
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) WET FLUE GAS DESULFURIZATION (FGD), WESP, AND PROPER BOILER DESIGN

**POLLUTANT NAME:** SO2
**CAS Number:** 7446-09-5
**Emission Limit 1:** 0.1670 LB/MMBTU 30 day rolling avg
**Emission Limit 2:** 0.4100 LB/MMBTU 24 h avg
**Standard Emission:** 0.1670 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (B) PROPER BOILER DESIGN, LOW NOX BURNERS, AND SOR

**POLLUTANT NAME:** NOX
**CAS Number:** 10102
**Emission Limit 1:** 0.0800 LB/MMBTU 30 day rolling avg
**Standard Emission:** 0.0800 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) PROPER BOILER DESIGN AND OPERATION

**POLLUTANT NAME:** VOC
**CAS Number:** VOC
**Emission Limit 1:** 0.0072 LB/MMBTU 30 day rolling avg
**Standard Emission:** 0.0072 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) PROPER BOILER DESIGN AND OPERATION

**POLLUTANT NAME:** Beryllium
**CAS Number:** 7440-41-7
**Emission Limit 1:** 9.4400 E-7 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (A) ESP, WESP, WFQD

**POLLUTANT NAME:** HF
**CAS Number:** 7664-39-3
**Emission Limit 1:** 1.9900 E-4 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (B) PROPER BOILER DESIGN AND CONTROL TECHNOLOGY, WFGD, AND WESP

**POLLUTANT NAME:** H2SO4 MIST
**CAS Number:** 7664-93-9
**Emission Limit 1:** 4.9700 E-3 LB/MMBTU
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (B) PROPER BOILER DESIGN AND CONTROL TECHNOLOGY, ESP, FGD, AND WESP

---

**Process/Pollutant Information**

**PROCESS NAME:** BOILER, AUXILIARY, DIESEL
**Process Type:** 11.220 (Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))

**Primary Fuel:** DIESEL

**Throughput:** 300.00 MMBTU/H

**Process Notes:** The auxiliary boiler shall only operate during start-up periods of one utility boiler or when no utility boilers are in operation. The auxiliary boiler shall not operate more than 500 hours per twelve (12) consecutive months

**POLLUTANT NAME:** PM
**CAS Number:** PM
**Emission Limit 1:** 0.0030 MMBTU/H
**Standard Emission:** 0.0060 MMBTU/H
**Case-by-Case Basis:** BACT-PSD
**Control Method:** (P) GOOD OPERATING PRACTICE, OPERATION LIMIT < 500 H/yr
<table>
<thead>
<tr>
<th>POLLUTANT NAME:</th>
<th>CAS Number:</th>
<th>Emission Limit 1:</th>
<th>Standard Emission:</th>
<th>Case-by-Case Basis:</th>
<th>Control Method:</th>
<th>Pollutant/Compliance Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>10102</td>
<td>0.1200 LB/MMBTU</td>
<td>0.1200 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) GOOD OPERATING PRACTICE, OPERATING LIMIT &lt; 500 H/YR</td>
<td>basis is state regulation</td>
</tr>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>0.0600 LB/MMBTU</td>
<td>0.0600 LB/MMBTU</td>
<td>Other Case-by-Case</td>
<td>(P) GOOD OPERATING PRACTICE, LIMIT ON OPERATING HOURS</td>
<td>basis is state regulation</td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>0.0300 LB/MMBTU</td>
<td>see note</td>
<td>Other Case-by-Case</td>
<td>(P) GOOD OPERATING PRACTICE, LIMIT ON OPERATING HOURS</td>
<td>basis is state regulation</td>
</tr>
<tr>
<td>SO2</td>
<td>7446-09-5</td>
<td>0.0500 LB/MMBTU</td>
<td>0.0500 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(P) GOOD OPERATING PRACTICE, LIMIT ON OPERATING HOURS</td>
<td>basis is state regulation</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>99.0000 % REDUCTION baghouse</td>
<td>see note</td>
<td>BACT-PSD</td>
<td>(B) ENCLOSURES/PARTIAL ENCLOSURES, BAGHOUSE, BIN FILTERS, LOW-PRESSURE DROP AND TELESCOPIC CHUTES</td>
<td>basis is state regulation</td>
</tr>
<tr>
<td>VE</td>
<td>VE</td>
<td>20.0000 % OPACITY</td>
<td>20.0000 % OPACITY</td>
<td>BACT-PSD</td>
<td>(B) ENCLOSURES/PARTIAL ENCLOSURES, BAGHOUSE, BIN FILTERS, LOW-PRESSURE DROP AND TELESCOPIC CHUTES</td>
<td>basis is state regulation</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**PROCESS NAME:** COAL HANDLING AND STORAGE

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**Process Notes:**
coal handling and storage. 12 machine points, with capacities between 2000 t/h and 500 t/h.

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 99.0000 % REDUCTION baghouse

**Standard Emission:** see note

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (B) ENCLOSURES/PARTIAL ENCLOSURES, BAGHOUSE, BIN FILTERS, LOW-PRESSURE DROP AND TELESCOPIC CHUTES

**Pollutant/Compliance Notes:** basis is state regulation

**PROCESS NAME:** FGD REAGENT PREP HANDLING, LIME

**Process Type:** 90.024 (Non-metallic Mineral Processing (except 90.011, 90.019, 90.017, 90.026))

**Throughput:** 400.00 T/H

**Process Notes:**
Six units, throughput of 400 t/h each

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0500 GDSCM

**Standard Emission:** 0.0500 GDSCM

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) ENCLOSURES AND FILTERS

**Pollutant/Compliance Notes:** limits based on Regulation 401 KAR 60.670, incorporating by reference 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, as modified by Section 3 of 401 KAR 60.670

**PROCESS NAME:** VE

**CAS Number:** VE

**Emission Limit 1:** 7.0000 % OPACITY

**Standard Emission:** 7.0000 % OPACITY

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (A) ENCLOSURES AND FILTERS

**Pollutant/Compliance Notes:** opacity entered above is for stack (point). Fugitive opacity limit is 10% opacity
Facility Information

RBLC ID: LA-0176 (draft)  
Date Determined Last Updated: 2/2/2006

Corporate/Company Name: LOUISIANA GENERATING, LLC  
Permit Number: PSD-LA-677  
Permit Date: 08/22/2005 (actual)

Facility Name: BIG CAJUN II POWER PLANT  
FRS Number: 1.1E+11

Facility Contact: GARY ELLENDER  2256383773  GARY.ELLENDER@NRGENERGY.COM

Permit Type: B: Add new process to existing facility

EPA Region: 6

Facility State: LA

Process/Pollutant Information

PROCESS NAME: NEW 675 MW PULVERIZED COAL BOILER (UNIT 4)  
Primary Fuel: SUBBITUMINOUS COAL

Throughput: 3518791.00 t/yr

Process Notes: PC Boiler is of Supercritical Design.

POLLUTANT NAME: PM10  
CAS Number: 7446-09-5

Emission Limit 1: 98.5000 LB/H HOURLY MAXIMUM

Emission Limit 2: 431.4000 T/YR ANNUAL MAXIMUM

Standard Emission: 0.0150 LB/MMBTU ANNUAL AVERAGE

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS, OPERATING PERMIT, SIP

Control Method: (A) ESP AND BAGHOUSE IN SERIES CONFIGURATION

Est. % Efficiency: 99.9

POLLUTANT NAME: SO2  
CAS Number: 7446-09-5

Emission Limit 1: 656.6000 LB/H HOURLY MAXIMUM

Emission Limit 2: 2875.9000 T/YR ANNUAL MAXIMUM

Standard Emission: 0.1000 LB/MMBTU ANNUAL AVERAGE

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS, OPERATING PERMIT, SIP

Control Method: (A) OPTION 1: SEMI-DRY LIME SCRUBBER OPTION 2: WET FLUE GAS DESULFURIZATION SYSTEM

Est. % Efficiency: 90

POLLUTANT NAME: NOX  
CAS Number: 10102

Emission Limit 1: 459.6000 LB/H HOURLY MAXIMUM

Emission Limit 2: 2013.1000 T/YR ANNUAL MAXIMUM

Standard Emission: 0.0700 LB/MMBTU ANNUAL AVERAGE

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: NSPS, OPERATING PERMIT, SIP

Control Method: (B) LOW NOX BURNERS AND SELECTIVE CATALYTIC REDUCTION

Est. % Efficiency: 70

POLLUTANT NAME: CO  
CAS Number: 630-08-0

Emission Limit 1: 886.4000 LB/H HOURLY MAXIMUM

Emission Limit 2: 3882.5000 T/YR ANNUAL MAXIMUM

Standard Emission: 0.1350 LB/MMBTU ANNUAL AVERAGE

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: OPERATING PERMIT

Control Method: (P) OPTIMUM BURNER DESIGN AND GOOD COMBUSTION TECHNIQUES

POLLUTANT NAME: VOC  
CAS Number: VOC

Emission Limit 1: 98.5000 LB/H HOURLY MAXIMUM

Emission Limit 2: 431.4000 T/YR ANNUAL MAXIMUM

Standard Emission: 0.0150 LB/MMBTU ANNUAL AVERAGE

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: OPERATING PERMIT

Control Method: (P) OPTIMUM BURNER DESIGN AND GOOD COMBUSTION TECHNIQUES
Facility Information

Corporate/Company Name: BULL MOUNTAIN DEV. COMPANY
Facility Name: BULL MOUNTAIN, NO. 1, LLC - ROUNDUP POWER PROJECT
Facility Contact: JOE DICKEY  865-577-9192
Facility Description: COAL FIRED POWER PLANT
Facility State: MT

Corporate/Company Name: BULL MOUNTAIN DEV. COMPANY
Permit Number: 3182-00
Facility Name: BULL MOUNTAIN, NO. 1, LLC - ROUNDUP POWER PROJECT
Permit Date: 07/21/2003 (actual)
Facility Contact: JOE DICKEY  865-577-9192
Facility Description: COAL FIRED POWER PLANT
Facility State: MT

Permit Type: A: New/Greenfield Facility
NAICS: 221112

EPA Region: 8

Process/Pollutant Information

PROCESS NAME: BOILER, PC NO. 1
Process Type: Coal (includes bituminous, subbituminous, anthracite, and lignite)
Primary Fuel: COAL
Throughput: 390.00 MW
Process Notes: Additional throughput: 4013 mmbtu/h - full load heat input. Stack tests & inspections are required by the permit after construction/operation of the facility. Calculations will be used in the future also. Calculations were the primary factor considered during the permitting process.

POLLUTANT NAME: NOX
CAS Number: 10102
Emission Limit 1: 285.9000 LB/H rolling 24 h avg
Emission Limit 2: 0.0700 LB/MMBTU rolling 24 h avg
Standard Emission: 0.0700 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (B) LOW NOX BURNER, OVERFIRE AIR, AND SCR
Est. % Efficiency: 90
Pollutant/Compliance Notes: incremental cost effectiveness: $1332/t pollutant removed

POLLUTANT NAME: CO
CAS Number: 630-08-0
Emission Limit 1: 602.0000 LB/H
Emission Limit 2: 0.1500 LB/MMBTU
Standard Emission: 0.1500 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (A) DRY FLUE GAS DESULFURIZATION (FGD)
Est. % Efficiency: 94.5
Pollutant/Compliance Notes: Based on testing, Roundup Power is required to determine the feasibility of changing this limit to 48.2 lb/h (0.012 lb/mmbtu) based on a rolling 24-h average

POLLUTANT NAME: PM10
CAS Number: PM
Emission Limit 1: 60.2000 LB/H
Emission Limit 2: 0.0150 LB/MMBTU
Standard Emission: 0.0150 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (A) FABRIC FILTERS
Est. % Efficiency: 99.82
Pollutant/Compliance Notes: same control as for SO2

POLLUTANT NAME: VOC
CAS Number: VOC
Emission Limit 1: 12.0000 LB/H
Emission Limit 2: 0.0030 LB/MMBTU
Case-by-Case Basis: BACT-PSD
POLLUTANT NAME: H2SO4
CAS Number: 7664-93-9
Emission Limit 1: 25.7000 LB/H
Emission Limit 2: 0.0064 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (A) DRY FLUE GAS DESULFURIZATION (FGD) - SPRAY DRY ABSORBER
Est. % Efficiency: 90
Pollutant/Compliance Notes: same control as for SO2

Process/Pollutant Information

PROCESS NAME: BOILER, PC NO. 2
Process Type: Coal (includes bituminous, subbituminous, anthracite, and lignite)
Primary Fuel: COAL
Throughput: 390.00 MW
Process Notes: Stack tests and inspections are required by the permit after construction/operation of the facility. Calculations will be used in the future also. Calculations were the primary factor considered during the permitting process.

POLLUTANT NAME: NOX
CAS Number: 10102
Emission Limit 1: 285.9000 LB/H rolling 24 h avg
Emission Limit 2: 0.0700 LB/MMBTU rolling 24 h avg
Standard Emission: 0.0700 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (B) LOW NOX BURNER, OVERFIRE AIR, SCR
Est. % Efficiency: 90
Pollutant/Compliance Notes: Incremental cost effectiveness: $1332/t pollutant removed.

POLLUTANT NAME: CO
CAS Number: 630-08-0
Emission Limit 1: 602.0000 LB/H
Emission Limit 2: 0.1500 LB/MMBTU
Standard Emission: 0.1500 LB/MMBTU
Case-by-Case Basis: BACT-PSD
**POLLUTANT NAME:** SO2  
**CAS Number:** 7446-09-5  
**Emission Limit 1:** 481.6000 LB/H rolling 24 h avg  
**Emission Limit 2:** 0.1200 LB/MMBTU rolling 24 h avg  
**Standard Emission:** 0.1200 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** (A) DRY FLUE GAS DESULFURIZATION (FGD)  
**Est. % Efficiency:** 94.5

**POLLUTANT NAME:** PM10  
**CAS Number:** PM  
**Emission Limit 1:** 60.2000 LB/H  
**Emission Limit 2:** 0.0150 LB/MMBTU  
**Standard Emission:** 0.0150 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Est. % Efficiency: 99.82

**POLLUTANT NAME:** VOC  
**CAS Number:** VOC  
**Emission Limit 1:** 12.0000 LB/H  
**Emission Limit 2:** 0.0030 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD

**POLLUTANT NAME:** H2SO4  
**CAS Number:** 7664-93-9  
**Emission Limit 1:** 25.7000 LB/H  
**Emission Limit 2:** 0.0064 LB/MMBTU  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Est. % Efficiency: 90

---

**PROCESS NAME:** BOILER, AUXILIARY, # 1 & #2  
**Process Type:** 12.220 (Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel))  
**Primary Fuel:** FUEL OIL  
**Throughput:** 117.00 MMBTU/H  
**Process Notes:** Throughput is for each of the two boilers. Fuel is low sulfur No. 2 fuel oil. Requested hourly limitations on the auxiliary boilers - 3300 h/y combined. Testing and inspections upon construction.

**POLLUTANT NAME:** SO2  
**CAS Number:** 7446-09-5  
**Emission Limit 1:** 6.4700 % REDUCTION see note  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: A minimum reduction of 81% from the hourly operation limit.

**POLLUTANT NAME:** NOX  
**CAS Number:** 10102  
**Emission Limit 1:** 19.8000 LB/H each  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: A minimum reduction of 81% from the hourly operation limit.

**POLLUTANT NAME:** CO  
**CAS Number:** 630-08-0  
**Emission Limit 1:** 4.1200 LB/H each  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: A 81% reduction from reduced hours.

---

**PROCESS NAME:** IC ENGINE, EMERGENCY GENERATOR  
**Process Type:** 17.210 (Fuel Oil)  
**Primary Fuel:** NO. 2 FUEL OIL  
**Throughput:** 15.30 MMBTU/H  
**Process Notes:** Inspections of the facility, including the emergency generator, will take place after construction.

**POLLUTANT NAME:** SO2  
**CAS Number:** 7446-09-5  
**Emission Limit 1:** 97.7000 % REDUCTION see note  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: Determination is pollution prevention. % reduction based on hourly limit to operation.

**POLLUTANT NAME:** NOX  
**CAS Number:** 10102  
**Emission Limit 1:** 97.7000 % REDUCTION  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: Determination is pollution prevention. % reduction based on hourly limit to operation.

**POLLUTANT NAME:** CO  
**CAS Number:** 630-08-0  
**Emission Limit 1:** 97.7000 % REDUCTION  
**Case-by-Case Basis:** BACT-PSD  
**Control Method:** Pollutant/Compliance Notes: Determination is pollution prevention. % reduction based on hourly limit to operation.

---

**PROCESS NAME:** SPRAY DRY ABSORBER  
**Process Type:** (A) DRY FLUE GAS DESULFURIZATION (FGD)  
**Primary Fuel:** FUEL OIL  
**Throughput:** 25.7000 LB/H  
**Process Notes:** Same controls as for SO2.

---

**PROCESS NAME:** USE OF LOW SULFUR FUEL OIL (0.05% S), LIMIT ON HOURS OF OPERATION.  
**Process Type:** (P) LOW NOx BURNERS, HOURLY OPERATION LIMIT  
**Primary Fuel:** FUEL OIL  
**Throughput:** 18.0000 LB/H each  
**Process Notes:** A minimum of 81% reduction of emissions, based on limits on the hours of operation.

---

**PROCESS NAME:** LIMIT ON OPERATING HOURS  
**Process Type:** (P) LIMITED HOURS OF OPERATION TO 200 H/YR  
**Primary Fuel:** FUEL OIL  
**Throughput:** 17.210 LB/H  
**Process Notes:** Determination is pollution prevention. % reduction based on hourly limit to operation.

---

**PROCESS NAME:** LIMIT ON OPERATING HOURS  
**Process Type:** (P) LIMITED TO 200 HOURS OF OPERATION PER YEAR  
**Primary Fuel:** FUEL OIL  
**Throughput:** 17.210 LB/H  
**Process Notes:** Determination is pollution prevention. % reduction based on hourly limit to operation.
**Process/Pollutant Information**

**PROCESS NAME:** MATERIAL TRANSFER, COAL HANDLING TRANSFER POINTS

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF

**Standard Emission:** 0.0100 GR/DSCF

**Case-by-Case Basis:** BACT-PSD

**Control Method:** BACT-PSD

**Est. % Efficiency:** 91

**Pollutant/Compliance Notes:** Emissions from source are mostly fugitive emissions, but emissions from baghouse are point source emissions.

**PROCESS NAME:** MATERIAL TRANSFER, LIME HANDLING TRANSFER POINTS

**Process Type:** 90.019 (Lime/Limestone Handling/Kilns/Storage/Manufacturing)

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 0.0100 GR/DSCF

**Standard Emission:** 0.0100 GR/DSCF

**Case-by-Case Basis:** BACT-PSD

**Control Method:** BACT-PSD

**Est. % Efficiency:** 91

**Pollutant/Compliance Notes:** Emissions are mostly fugitive sources, but become point sources at the exit from baghouses.

**PROCESS NAME:** MATERIAL HANDLING, FLY ASH HANDLING TRANSFER POINT

**Process Type:** 94.120 (Ash Storage, Handling, Disposal)

**Proc. Notes:** Compliance will be verified after construction with certain provisions of the permit.

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Case-by-Case Basis:** BACT-PSD

**Control Method:** BACT-PSD

**Est. % Efficiency:** 91

**Pollutant/Compliance Notes:** Source is mostly fugitive, but point source at bin vent exit.

**Process/Pollutant Information**

**PROCESS NAME:** ACTIVE COAL STORAGE PILE

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 98.0000 % REDUCTION see note

**Case-by-Case Basis:** BACT-PSD

**Control Method:** BACT-PSD

**Est. % Efficiency:** 98

**Pollutant/Compliance Notes:** No emission rate limits, BACT is pollution prevention

**PROCESS NAME:** INACTIVE COAL STORAGE PILE

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**POLLUTANT NAME:** PM

**CAS Number:** PM

**Emission Limit 1:** 98.0000 % REDUCTION see note

**Case-by-Case Basis:** BACT-PSD

**Control Method:** BACT-PSD

**Pollutant/Compliance Notes:** No emission rate limits, BACT is pollution prevention

---

**Material Transfer, Coal Handling Transfer Points:**

- **Source:** Mostly fugitive, but point source at exit.
- **Control Method:** BACT-PSD
- **Est. % Efficiency:** 91
- **Pollutant/Compliance Notes:** Emissions from source are mostly fugitive emissions, but emissions from baghouse are point source emissions.

**Material Transfer, Lime Handling Transfer Points:**

- **Source:** Mostly fugitive, but become point sources at the exit from baghouses.
- **Control Method:** BACT-PSD
- **Est. % Efficiency:** 91
- **Pollutant/Compliance Notes:** Emissions are mostly fugitive sources, but become point sources at the exit from baghouses.

**Material Handling, Fly Ash Handling Transfer Point:**

- **Source:** Mostly fugitive, but point source at exit.
- **Control Method:** BACT-PSD
- **Est. % Efficiency:** 91
- **Pollutant/Compliance Notes:** Emissions are mostly fugitive sources, but become point sources at the exit from baghouses.

**Active Coal Storage Pile:**

- **Source:** Mostly fugitive, but point source at exit.
- **Control Method:** BACT-PSD
- **Est. % Efficiency:** 98
- **Pollutant/Compliance Notes:** No emission rate limits, BACT is pollution prevention.

**Inactive Coal Storage Pile:**

- **Source:** Mostly fugitive, but point source at exit.
- **Control Method:** BACT-PSD
- **Est. % Efficiency:** 98
- **Pollutant/Compliance Notes:** No emission rate limits, BACT is pollution prevention.
Facility Information

RBLC ID: UT-0065 (draft)
Date Determined Last Updated: 2/7/2006
Corporate/Company Name: INTERMOUNTAIN POWER SERVICE CORPORATION
Permit Number: DAQE-AN0327010-04
Permit Date: 10/15/2004 (actual)
Facility Name: INTERMOUNTAIN POWER GENERATING STATION - UNIT #3
Permit Type: B: Add new process to existing facility
NAICS: 221112
Facility State: UT

Process/Pollutant Information

PROCESS NAME: PULVERIZED COAL FIRED ELECTRIC GENERATING UNIT
Process Type: 11.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)
Primary Fuel: BITUMINOUS OR BLEND
Throughput: 950.00 MW-gross
POLLUTANT NAME: NOX
CAS Number: 10102
Emission Limit 1: 0.0700 LBM/MMBTU 30-DAY ROLLING AVERAGE
Emission Limit 2: 633.5000 LB/H 24-BLOCK AVERAGE
Standard Emission: 0.0700 LBM/MMBTU
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) LOW NOX BURNERS, OVER FIRE AIR, SCR
Est. % Efficiency: 80
Pollutant/Compliance Notes: VERIFIED BY CEM

POLLUTANT NAME: SO2
CAS Number: 7446-09-5
Emission Limit 1: 0.1000 LBM/MMBTU 24-BLOCK AVERAGE
Emission Limit 2: 0.0000 LBM/MMBTU 30-DAY ROLLING AVERAGE
Standard Emission: 0.1000 LBM/MMBTU
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (N) WET FLUE GAS DESULPHURIZATION, LOW SULFER COAL
Est. % Efficiency: 90
Pollutant/Compliance Notes: VERIFIED BY CEM

POLLUTANT NAME: CO
CAS Number: 630-08-0
Emission Limit 1: 0.1500 LBM/MMBTU 30-DAY ROLLING AVERAGE
Emission Limit 2: 3000.0000 LB/H 8-HOUR BLOCK AVERAGE
Standard Emission: 0.1500 LBM/MMBTU
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (P) COMBUSTION CONTROL
Pollutant/Compliance Notes: VERIFIED BY CEM OR EQUIVALENT

POLLUTANT NAME: VOC
CAS Number: VOC
Emission Limit 1: 0.0027 LBM/MMBTU 3-TEST RUN AVERAGE ANNUALLY
Case-by-Case Basis: BACT-PSD
Control Method: (P) COMBUSTION CONTROL

POLLUTANT NAME: PM10
CAS Number: PM
Emission Limit 1: 0.0120 LBM/MMBTU 3-TEST RUN AVERAGE ANNUALLY
Emission Limit 2: 221.0000 LB/H 24-BLOCK AVERAGE
Standard Emission: 0.0120 LBM/MMBTU
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) BAGHOUSE/FABRIC FILTER
Est. % Efficiency: 99.85
Pollutant/Compliance Notes: PM FILTERABLE

POLLUTANT NAME: H2SO4
CAS Number: 7664-93-9
Emission Limit 1: 0.0044 LBM/MMBTU 24-BLOCK AVERAGE/ANNUAL TEST
Standard Emission: 0.0044 LBM/MMBTU
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements:
Control Method: (A) WET FLUE GAS DESULPHURIZATION
Pollutant/Compliance Notes: TEST EVERY 5 YEARS
<table>
<thead>
<tr>
<th>POLLUTANT NAME</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Case-by-Case Basis</th>
<th>Other Applicable Requirements</th>
<th>Control Method</th>
<th>Pollutant/Compliance Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB</td>
<td>7439-92-1</td>
<td>0 LB/MMBTU 3-TEST RUN AVERAGE</td>
<td>BACT-PSD</td>
<td>Operating Permit</td>
<td>(A) Baghouse/Fabric Filter</td>
<td></td>
</tr>
<tr>
<td>HG</td>
<td>7439-97-6</td>
<td>0 LB/MMHR 12-MONTH ROLLING AVERAGE/BITUMINOUS</td>
<td>BACT-PSD</td>
<td>Operating Permit</td>
<td>AS PER PROPOSED RULE AT THE TIME WHEN THE REVIEW COMPLETED</td>
<td></td>
</tr>
<tr>
<td>HF</td>
<td>7664-39-3</td>
<td>0.0005 LB/MMBTU 5-TEST RUN AVERAGE</td>
<td>BACT-PSD</td>
<td>Operating Permit</td>
<td>Initial Test and Every 5 Years</td>
<td></td>
</tr>
</tbody>
</table>
**Facility Information**

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RBLC ID:</td>
<td>WI-0228 (draft)</td>
</tr>
<tr>
<td>Corporate/Company Name:</td>
<td>WISCONSIN PUBLIC SERVICE</td>
</tr>
<tr>
<td>Facility Name:</td>
<td>WPS - WESTON PLANT</td>
</tr>
<tr>
<td>Facility Contact:</td>
<td>DAVID HARPOLE 9204331264</td>
</tr>
<tr>
<td>Facility Description:</td>
<td>ELECTRICAL UTILITY</td>
</tr>
<tr>
<td>Permit Type:</td>
<td>A: New/Greenfield Facility</td>
</tr>
<tr>
<td>Date Determination Last Updated:</td>
<td>3/6/2006</td>
</tr>
<tr>
<td>Permit Number:</td>
<td>04-RV-248</td>
</tr>
<tr>
<td>Permit Date:</td>
<td>10/19/2004 (actual)</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>4911</td>
</tr>
<tr>
<td>NAICS:</td>
<td>22111 - ELECTRIC POWER GENERATION</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**PROCESS NAME:** SUPER CRITICAL PULVERIZED COAL ELECTRIC STEAM BOILER (S04, P04)

- **Primary Fuel:** PRB COAL
- **Throughput:** 5173.07 MMBTU/H
- **Process Notes:** POLLUTANT MEASUREMENT INCLUDES BACKHALF (METHOD 5 OR 5B + METHOD 202)

**POLUTANT NAME:** HCL

- **CAS Number:** 7647-01-0
- **Emission Limit 1:** 10.9400 LB/H 24 HR AVG.
- **Control Method:** MACT

**POLUTANT NAME:** PM

- **CAS Number:** PM
- **Emission Limit 1:** 0.0200 LB/MMBTU 3 HR. AVG
- **Emission Limit 2:** 103.5200 LB/H 3 HR. AVG.
- **Control Method:** BACT-PSD

**POLUTANT NAME:** PM10

- **CAS Number:** 7446-09-5
- **Emission Limit 1:** 0.1000 LB/MMBTU 30 DAY AVG
- **Emission Limit 2:** 0.0900 LB/MMBTU 12 MO. ROLLING AVG. INCL. STARTUP / SHUTDOWN

**POLUTANT NAME:** SO2

- **CAS Number:** 7446-09-5
- **Emission Limit 1:** 0.0200 LB/MMBTU 3 HR. AVG
- **Emission Limit 2:** 103.5200 LB/H 3 HR. AVG.
- **Control Method:** BACT-PSD

**POLUTANT NAME:** NOX

- **CAS Number:** 10102
- **Emission Limit 1:** 0.0700 LB/MMBTU 30 DAY AVG. EXCL. STARTUP / SHUTDOWN
- **Emission Limit 2:** 0.0600 LB/MMBTU 12 MO. AVG. INCL. STARTUP / SHUTDOWN

**POLUTANT NAME:** VOC

- **CAS Number:** VOC
- **Emission Limit 1:** 0.0036 LB/MMBTU
- **Emission Limit 2:** 816000 T/YR 12 MO. ROLLING, INCL. STARTUP / SHUTDOWN

**POLUTANT NAME:** PB

- **CAS Number:** 7439-92-1
- **Emission Limit 1:** 0.1330 LB/H

**POLUTANT NAME:** HG

- **CAS Number:** 7439-97-6
- **Emission Limit 1:** 1.7000 LB/TRILLION-BTU 12 MO. ROLLING

**Pollutant/Compliance Notes:**

- NSPS
- POLLUTANT LIMITS INCLUDE STARTUP / SHUTDOWN AND ATOMIZER CHANGEOUT. PERMITTEE MAY ONLY USE ACTUAL HOURS OF OPERATION WHEN DETERMINING TIME AVERAGED EMISSIONS. WHEN CONDUCTING MAINTENANCE ON CONTROL SYSTEM (ROUTINE ATOMIZER CHANGEOUT): 3491.8 POUNDS PER HOUR ON A 3-HOUR AVERAGE AND 1508.9 POUNDS PER HOUR ON A 24-HOUR AVERAGE. CONTROLLED EMISSIONS: SULFUR DIOXIDE EMISSIONS SHALL BE LIMITED TO 621 POUNDS PER HOUR AVERAGED OVER ANY CONSECUTIVE 3-HOUR PERIOD AND SULFUR DIOXIDE EMISSIONS SHALL BE LIMITED TO 589 POUNDS PER HOUR AVERAGED OVER ANY CONSECUTIVE 24-HOUR PERIOD

**Est. % Efficiency:**

- SUPER CRITICAL PULVERIZED COAL ELECTRIC STEAM BOILER (S04, P04) 92
- ELECTRICAL UTILITY 83
POLLUTANT NAME: F  
CAS Number: 7782-41-4  
Emission Limit 1: 0.0002 LB/MMBTU  
Emission Limit 2: 1.1200 LB/H  
Case-by-Case Basis: BACT-PSD  
Control Method: (A) DRY FGD, BAGHOUSE  
POLLUTANT NAME: Beryllium  
CAS Number: 7440-41-7  
Emission Limit 1: 1.3000 LB/TRILLION-BTU  
Case-by-Case Basis: BACT-PSD  
Control Method: (A) FABRIC FILTER BAGHOUSE  
POLLUTANT NAME: HAP  
CAS Number: HAP  
Case-by-Case Basis: MACT  
Control Method:  
Pollutant/Compliance Notes:  
POLLUTANT NAME: NH3  
CAS Number: 7664-41-7  
Emission Limit 1: 3.0000 PPMDV 3% O2  
Emission Limit 2: 55.5200 LB/H  
Other Applicable Requirements: OTHER  
Control Method:  
POLLUTANT NAME: H2SO4 MIST  
CAS Number: 7664-93-9  
Emission Limit 1: 0.0050 LB/MMBTU 24 HR AVG.  
Case-by-Case Basis: BACT-PSD  
Control Method:  
POLLUTANT NAME: PM10  
CAS Number: PM  
Emission Limit 1: 0.0075 LB/MMBTU 2000 HR / 12 MO. ROLLING  
Emission Limit 2: 1.7120 LB/H  
Case-by-Case Basis: BACT-PSD  
Other Applicable Requirements: NSPS  
Control Method: (P) NATURAL GAS ONLY, GOOD COMBUSTION PRACTICES  
POLLUTANT NAME: SO2  
CAS Number: 7446-09-5  
Emission Limit 1: 0.0008 LB/MMBTU 2000 HR / 12 MO. ROLLING LIMIT  
Emission Limit 2: 0.1400 LB/H  
Case-by-Case Basis: BACT-PSD  
Other Applicable Requirements: NSPS  
Control Method: (P) NATURAL GAS  
POLLUTANT NAME: NOX  
CAS Number: 10102  
Emission Limit 1: 0.1000 LB/MMBTU 2000 HRS / 12 MO. ROLLING  
Emission Limit 2: 22.9000 LB/H  
Case-by-Case Basis: BACT-PSD  
Other Applicable Requirements: NSPS  
Control Method: (P) NATURAL GAS, GOOD COMBUSTION PRACTICES, LOW NOX BURNERS,  
HIGH HEAT RELEASE RATE BOILER (NSPS LIMIT OF 0.2 LBS/MMBTU)  
POLLUTANT NAME: CO  
CAS Number: 830-08-0  
Emission Limit 1: 0.0800 LB/MMBTU 2000 HRS / 12 MO. ROLLING  
Emission Limit 2: 18.4000 LB/H  
Case-by-Case Basis: BACT-PSD  
Control Method: (P) NATURAL GAS, GOOD COMBUSTION PRACTICES, LOW NOX BURNER  
POLLUTANT NAME: VOC  
CAS Number: VOC  
Emission Limit 1: 0.0054 LB/MMBTU 2000 HRS / 12 MO. ROLLING  
Emission Limit 2: 1.2400 LB/H  
Case-by-Case Basis: BACT-PSD  
Control Method: (P) NATURAL GAS, GOOD COMBUSTION PRACTICES, LOW NOX BURNERS  
POLLUTANT NAME: PB  
CAS Number: 7439-02-1  
Emission Limit 1: 0 LB/MMBTU 2000 HRS / 12 MO. ROLLING  
Case-by-Case Basis: BACT-PSD  
Control Method: (P) NATURAL GAS, GOOD COMBUSTION PRACTICES  
POLLUTANT NAME: HG  
CAS Number: 7439-97-6  
Emission Limit 1: 0.0001 LB/H 2000 HRS / 12 MO. ROLLING  
Case-by-Case Basis: BACT-PSD  
Control Method: (P) NATURAL GAS  
POLLUTANT NAME: F  
CAS Number: 7782-41-4  
Emission Limit 1: 0.0003 LB/MMBTU 2000 HRS / 12 MO. ROLLING LIMIT  
Case-by-Case Basis: BACT-PSD  
Control Method: (P) NATURAL GAS
<table>
<thead>
<tr>
<th>Pollutant Name</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAP</td>
<td>HAP</td>
<td>400.0000 PPM CO AT 3% O2</td>
<td>MACT</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>H2SO4 Mist</td>
<td>7664-93-9</td>
<td>0.0210 LB/H 2000 HRS. / 12 MO. ROLLING LIMIT</td>
<td>BACT-PSD</td>
<td>(P) NATURAL GAS</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
<td>3.7500 LB/H</td>
<td>BACT-PSD</td>
<td>(B) HIGH EFFICIENCY DRIFT ELIMINATORS (0.002%)</td>
<td></td>
</tr>
<tr>
<td>NOX</td>
<td>10102</td>
<td>8.2100 LB/H 200 HRS. / 12 MO. ROLLING LIMIT</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT. % S) DIESEL FUEL OIL</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>1.7700 LB/H 200 HRS. / 12 MO. ROLLING LIMIT</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT% S) DIESEL FUEL OIL</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>0.7000 LB/H 200 HRS. / 12 MO. ROLLING LIMIT</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT% S) DIESEL FUEL OIL</td>
<td></td>
</tr>
<tr>
<td>PB</td>
<td>7439-92-1</td>
<td>0.0030 WT % S</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL</td>
<td></td>
</tr>
<tr>
<td>HG</td>
<td>7439-97-4</td>
<td>0.0017 LB/H 200 HRS. / 12 MO. ROLLING LIMIT</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>7762-41-4</td>
<td>0.0030 WT % S DIESEL FUEL</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL</td>
<td></td>
</tr>
</tbody>
</table>
Process/Pollutant Information

PROCESS NAME: MAIN FIRE PUMP (DIESEL ENGINE)
Process Type: 17.210 (Fuel Oil)
Primary Fuel: DIESEL FUEL OIL
Throughput: 480.00 HP
Process Notes: THIS UNIT WILL BE USED AS THE MAIN FIRE PUMP AND ONLY WILL BE USED FOR FIRE SUPPRESSION PURPOSES. THE MAIN FIRE PUMP WILL HAVE OPERATIONAL LIMIT OF 200 HOURS PER YEAR. 0.003% BY WEIGHT SULFUR FUEL

POLLUTANT NAME: VOC
CAS Number: VOC
Emission Limit 1: 1.1400 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

POLLUTANT NAME: PB
CAS Number: 7439-92-1
Emission Limit 1: 0 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

POLLUTANT NAME: HG
CAS Number: 7439-97-6
Emission Limit 1: 0 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

POLLUTANT NAME: F
CAS Number: 7782-41-4
Emission Limit 1: 0.0028 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

POLLUTANT NAME: H2SO4 MIST
CAS Number: 7664-93-9
Emission Limit 1: 0.1400 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: SYSTEM 1 - NEW RECLAIM TUNNEL EXIT, #34 (P30, S30)
Process Notes: CONTROL EQUIPMENT: FABRIC FILTER BAGHOUSE
POLLUTANT NAME: PM10
CAS Number: PM
Emission Limit 1: 1.0100 LB/H 200 HRS / 12 MO. ROLLING LIMIT
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: PM10
CAS Number: PM
Emission Limit 1: 0.4840 LB/H
Emission Limit 2: 0.0030 WT % S DIESEL FUEL OIL
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES, ULTRA LOW SULFUR (0.003 WT % S) DIESEL FUEL OIL
Pollutant/Compliance Notes: 10% OPACITY LIMIT
<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process/Pollutant Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 2:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
<tr>
<td>PROCESS/POLLUTANT INFORMATION</td>
</tr>
<tr>
<td>--------------------------------</td>
</tr>
<tr>
<td><strong>PROCESS NAME:</strong></td>
</tr>
<tr>
<td><strong>Process Type:</strong></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
</tr>
<tr>
<td><strong>POLUTANT NAME:</strong></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
</tr>
</tbody>
</table>

### Process/Pollutant Information

<table>
<thead>
<tr>
<th>PROCESS NAME:</th>
<th>F61, S61</th>
<th>MACHINE SHOP / WELDING SHOP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Type:</strong></td>
<td>99.012 (Welding &amp; Grinding)</td>
<td></td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
<td>(P)</td>
<td>WELDING ROD USAGE LIMIT</td>
</tr>
<tr>
<td><strong>POLUTANT NAME:</strong></td>
<td>PM10</td>
<td></td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
<td>PM</td>
<td></td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
<td>0.0050 LB/H</td>
<td></td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
<td>BACT-PSD</td>
<td></td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
<td>(P)</td>
<td>WELDING ROD USAGE LIMIT</td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
<td>THE TOTAL AMOUNT OF ELECTRODES USED MAY NOT EXCEED 35,148 POUNDS IN ANY 12 CONSECUTIVE MONTHS. THE TOTAL AMOUNT OF ELECTRODES MAY NOT EXCEED 96 POUNDS PER DAY ON A MONTHLY AVERAGE.</td>
<td></td>
</tr>
</tbody>
</table>

### Process/Pollutant Information

<table>
<thead>
<tr>
<th>PROCESS NAME:</th>
<th>S62, RAILCAR FACILITY WELDING SHOP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Type:</strong></td>
<td>99.012 (Welding &amp; Grinding)</td>
</tr>
<tr>
<td><strong>POLUTANT NAME:</strong></td>
<td>PM10</td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
<td>PM</td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
<td>0.0050 LB/H</td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
<td>BACT-PSD</td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
<td>(P)</td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
<td>THE TOTAL AMOUNT OF ELECTRODES USED MAY NOT EXCEED 35,148 POUNDS IN ANY 12 CONSECUTIVE MONTHS. THE TOTAL AMOUNT OF ELECTRODES MAY NOT EXCEED 96 POUNDS PER DAY ON A MONTHLY AVERAGE.</td>
</tr>
</tbody>
</table>

### Process/Pollutant Information

<table>
<thead>
<tr>
<th>PROCESS NAME:</th>
<th>S63, S64 - NATURAL GAS STATION HEATER 1 AND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Type:</strong></td>
<td>13.310 (Natural Gas (includes propane and liquefied petroleum gas))</td>
</tr>
<tr>
<td><strong>Primary Fuel:</strong></td>
<td>NATURAL GAS</td>
</tr>
<tr>
<td><strong>Throughput:</strong></td>
<td>0.75 MMBTU/H</td>
</tr>
<tr>
<td><strong>Process Notes:</strong></td>
<td>EMISSION LIMITS ARE THOSE FOR EACH UNIT.</td>
</tr>
<tr>
<td><strong>POLUTANT NAME:</strong></td>
<td>PB</td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
<td>7439-92-1</td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
<td>0 LB/H</td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
<td>BACT-PSD</td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
<td>(P)</td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
<td>(LIMIT IS FOR EACH UNIT)</td>
</tr>
<tr>
<td><strong>POLUTANT NAME:</strong></td>
<td>HG</td>
</tr>
<tr>
<td><strong>CAS Number:</strong></td>
<td>7439-97-6</td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
<td>0 LB/H</td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
<td>BACT-PSD</td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
<td>(P)</td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
<td>(LIMIT IS FOR EACH UNIT)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POLUTANT NAME:</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CAS Number:</strong></td>
<td>7782-41-4</td>
</tr>
<tr>
<td><strong>Emission Limit 1:</strong></td>
<td>0.0002 LB/H</td>
</tr>
<tr>
<td><strong>Case-by-Case Basis:</strong></td>
<td>BACT-PSD</td>
</tr>
<tr>
<td><strong>Control Method:</strong></td>
<td>(P)</td>
</tr>
<tr>
<td><strong>Pollutant/Compliance Notes:</strong></td>
<td>(LIMIT IS FOR EACH UNIT)</td>
</tr>
<tr>
<td>POLLUTANT NAME</td>
<td>CAS Number</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**PROCESS NAME:** P65, S65, P68, S68; PAC TRUCK UNLOADING, PAC SILO LOADING

**Process Type:** 90.011 (Coal Handling/Processing/Preparation/Cleaning)

**Process Notes:** NOTE TO RBLC REVIEWER — JOE S. (RBLC STAFF) FILLED IN BLANK PROC. TYPE CODE. PLEASE CHECK IT!!

**POLLUTANT NAME:** PM10  CASE NUMBER: PM

**Emission Limit 1:** 0.0200 GR/DSCF

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (P) NATURAL GAS

**Pollutant/Compliance Notes:** LIMIT IS FOR EACH UNIT

**Pollutant/Compliance Notes:** PM AND PM10 (INCL. M202 BACKHALF CATCH); 10 % OPACITY LIMIT (LIMIT IS FOR EACH UNIT)

**Process/Pollutant Information**

**PROCESS NAME:** P134 ROADWAYS

**Process Type:** 99.140 (Paved Roads)

**Process Notes:** ALL HAUL ROADS ON-SITE WILL BE PAVED WHERE POSSIBLE. THE FOLLOWING ARE THE NEW ROADS FOR THE WESTON 4 PROJECT SOURCES: R09-W4 FLY ASH ALTERNATE R10-W4 LINE DELIVERIES R11-W4 BOTTOM ASH (DAILY ROUTE) R13 - W4 SALABLE FLY ASH (IN SEASON) R14 - W4 PAC DELIVERIES THESE ROADS WILL ONLY BE OPERATED FROM 6 AM TILL 10 PM (16 HOURS EACH DAY)

**POLLUTANT NAME:** PM  CASE NUMBER: PM

**Emission Limit 1:** 0.2100 LB/H

**Case-by-Case Basis:** BACT-PSD

**Control Method:** (P) NATURAL GAS

**Pollutant/Compliance Notes:** LIMIT IS FOR EACH UNIT

**Pollutant/Compliance Notes:** PM AND PM10 (INCL. M202 BACKHALF CATCH); 10 % OPACITY LIMIT (LIMIT IS FOR EACH UNIT)

**Process/Pollutant Information**

**PROCESS NAME:** P49, S49, SYSTEM 4 - FGD BYPRODUCT RECYCLE BIN VENT, #24

**Process Type:** 11.110 (Coal (includes bituminous, subbituminous, anthracite, and lignite))

**Process/Pollutant Information**

**PROCESS NAME:** GAS FIRED DILUTION AIR HEATER (S09, S04)

**Process Type:** 13.310 (Natural Gas (includes propane and liquefied petroleum gas))

**Primary Fuel:** NATURAL GAS

**Throughput:** 3.10 MMBTU/H

**Process Notes:** NO SEPARATE LIMITATIONS (REFER TO THE LIMITATIONS FOR THE SCPC BOILER)

**Process/Pollutant Information**

**PROCESS NAME:** P48, S48, SYSTEM 3 - FGD PRODUCT MECHANICAL EXHAUSTER, #23

**Process Type:** 11.110 (Coal (includes bituminous, subbituminous, anthracite, and lignite))
Facility Information

RBLC ID: WV-0023 (final)  Date Determination Last Updated: 12/6/2005
Corporate/Company Name: LONGVIEW POWER, LLC  Permit Number: R14-0024
Facility Name: MAIDSVILLE  Permit Date: 03/02/2004 (actual)
Facility Contact: TOM WHEBLE  7814499980226  TOM_WHEBLE@GENPOWER.NET
FRS Number: NOT FOUND
Facility Description: PULVERIZED COAL-FIRED STEAM GENERATOR CAPABLE OF GENERATING 600MW OF ELECTRIC POWER. THIS FACILITY IS A GREEN FIELD SITE, WHICH INCLUDES A 6,114 MMBTU COAL-FIRED BOILER, 225 MMBTU NATURAL GAS-FIRED AUX BOILER, EMERGENCY GENERATOR, FIRE WATER PUMP ENGINE, COOLING TOWERS, AND MATERIAL HANDLING SYSTEMS.
SIC Code: 4911

Process/Pollutant Information

PROCESS NAME: BOILER, PC
Process Type: 11.110 (Coal (includes bituminous, subbituminous, anthracite, and lignite))
Primary Fuel: PULVERIZED COAL
Throughput: 6114.90 mmbtu/h
POLLUTANT NAME: CO  CAS Number: 630-08-0
Emission Limit 1: 0.1100 LBM/MBTU 3 HOUR ROLLING
Standard Emission: 0.0800 LBM/MBTU 24 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (P) GOOD COMBUSTION PRACTICES
Pollutant/Compliance Notes: IN SETTLEMENT AGREEMENT OF APPEAL NO. 04-03-AQB, EXHIBIT B HAS A NOX LIMIT OF 0.07 LBM/MBTU ON A 30-DAY ROLLING AVERAGE AND 0.065 LBM/MBTU BASED ON A CALENDAR YEAR. THESE LIMITS WERE NOT AGREED TO BY THE WVDEP AND ARE NOT CONSIDERED AS BACT. IN SETTLEMENT AGREEMENT OF APPEAL NO. 04-03-AQB, EXHIBIT B HAS A SO2 LIMIT OF 0.095 LBM/MBTU, WHICH WAS NOT AGREED BY THE WVDEP AND NOT CONSIDERED AS BACT.
POLLUTANT NAME: NOX  CAS Number: 10102
Emission Limit 1: 0.0800 LBM/MBTU 24 HOUR ROLLING
Standard Emission: 0.0800 LBM/MBTU 24 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (P) WET LIMESTONE FORCED OXIDATION
Pollutant/Compliance Notes: IN SETTLEMENT AGREEMENT OF APPEAL NO. 04-03-AQB, EXHIBIT B HAS A SO2 LIMIT OF 0.095 LBM/MBTU, WHICH WAS NOT AGREED BY THE WVDEP AND NOT CONSIDERED AS BACT.
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.0180 LBM/MBTU 6 HOUR ROLLING
Standard Emission: 0.0180 LBM/MBTU 6 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (B) DRY SOLID INJECTION W/ FABRIC FILTER AND WET SCRUBBER
Pollutant/Compliance Notes: COMPLIANCE WILL BE DEMONSTRATED BY PM CEMS
POLLUTANT NAME: PM10  CAS Number: PM
Emission Limit 1: 0.0180 LBM/MBTU 6 HOUR ROLLING
Standard Emission: 0.0180 LBM/MBTU 6 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (B) DRY SOLID INJECTION W/ FABRIC FILTER AND WET SCRUBBER
Pollutant/Compliance Notes: PM-10 INCLUDES FILTERABLE AND CONDENSIBLES
POLLUTANT NAME: OPACITY  CAS Number: VE
Standard Emission: 10.0000 % OPACITY
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (B) DRY SOLID INJECTION W/ FABRIC FILTER AND WET SCRUBBER
Pollutant/Compliance Notes: THE CONTINUOUS COMPLIANCE PLAN FOR VOCS FROM THE PC BOILER WAS PART OF THE SETTLEMENT AGREEMENT FOR APPEAL NO. 04-03-AQB WHICH WAS NOT AGREED TO BY THE WVDEP.
POLLUTANT NAME: VOC  CAS Number: VOC
Emission Limit 1: 0.0040 LBM/MBTU 3 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (P) GOOD COMBUSTION PRACTICES
Pollutant/Compliance Notes: THE CONTINUOUS COMPLIANCE PLAN FOR VOCS FROM THE PC BOILER WAS PART OF THE SETTLEMENT AGREEMENT FOR APPEAL NO. 04-03-AQB WHICH WAS NOT AGREED TO BY THE WVDEP.
POLLUTANT NAME: PB  CAS Number: 7439-92-1
Emission Limit 1: 0.0500 LBM 3 HOUR ROLLING
Case-by-Case Basis: NSPS
Other Applicable Requirements: NSPS
Control Method: (B) DRY SOLID INJECTION W/ FABRIC FILTER AND WET SCRUBBER
<table>
<thead>
<tr>
<th>POLLUTANT NAME</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Emission Limit 2</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
<th>Pollutant/Compliance Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2SO4</td>
<td>7664-93-9</td>
<td>45.8000 LB/H</td>
<td></td>
<td>BACT-PSD</td>
<td>(B) DRY SOLID INJECTION W/FABRIC FILTER</td>
<td>THE CONTINUOUS COMPLIANCE PLAN FOR H2SO4 FROM THE PC Boiler WAS PART OF THE SETTLEMENT AGREEMENT FOR APPEAL NO. 04-03-AQB, WHICH WAS NOT AGREED TO BY THE WVDEP.</td>
</tr>
<tr>
<td>HF</td>
<td>7664-39-3</td>
<td>0.0001 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HCL</td>
<td>7647-01-0</td>
<td>0.0001 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HG</td>
<td>7439-97-6</td>
<td>0.0146 LB/H 3 HOUR ROLLING AVERAGE</td>
<td>0.0638 T/YR 12 MONTH ROLLING AVERAGE</td>
<td>BACT-PSD</td>
<td>(B) DRY SOLID INJECTION W/FABRIC FILTER, AND WET LIMESTONE FORCED OXIDATION</td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>0.0400 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOX</td>
<td>10102</td>
<td>0.0980 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES, USE OF NATURAL GAS</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0022 LB/MMBTU 6 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) LOW NOX BURNERS AND GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
<td>0.0022 LB/MMBTU 6 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) LOW NOX BURNERS AND GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>SO2</td>
<td>7446-09-5</td>
<td>0.0040 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td>1.8000 E-5 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td>BACT-PSD</td>
<td>(P) GOOD COMBUSTION PRACTICES AND THE USE OF CLEAN FUELS</td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0022 LB/MMBTU 6 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) LOW SULFUR NATURAL GAS FUEL</td>
<td></td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>0.0054 LB/MMBTU 3 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) LOW SULFUR NATURAL GAS FUEL</td>
<td></td>
</tr>
<tr>
<td>OPCACITY</td>
<td>VE</td>
<td></td>
<td></td>
<td>BACT-PSD</td>
<td>(P) CLEAN FUELS AND GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
<tr>
<td>PM10</td>
<td>PM</td>
<td>0.0022 LB/MMBTU 6 HOUR ROLLING AVERAGE</td>
<td></td>
<td>BACT-PSD</td>
<td>(P) CLEAN FUELS AND GOOD COMBUSTION PRACTICES</td>
<td></td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

**PROCESS NAME:** AUXILIARY BOILER

**Process Type:** NATURAL GAS

**Throughput:** 225.00 mmbtu/h

**Process Notes:** LIMITED TO NATURAL GAS USE AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR

**Pollutant/Compliance Notes:** LIMITED TO USE OF NATURAL GAS AND 3,000 HOURS OF OPERATION PER YEAR
Pollutant/Compliance Notes: BACT FOR COOLING TOWER WAS DETERMINED TO BE 0.0002% DRIFT ELIMINATOR

POLUTANT NAME: PM10  CAS Number: PM
Emission Limit 1: 0.9000 LB/H
Emission Limit 2: 3.9000 T/YR
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP
Control Method: (A) REDUNDANT BAFFLE AND MESH DEMISTER SYSTEM

Pollutant/Compliance Notes: BACT FOR COOLING TOWER WAS DETERMINED TO BE 0.0002% DRIFT ELIMINATOR

Process/Pollutant Information

PROCESS NAME: EMERGENCY GENERATOR
Process Type: 17.110 (Fuel Oil)
Primary Fuel: DIESEL
Throughput: 1801.00 hp
Process Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

POLUTANT NAME: CO  CAS Number: 630-08-0
Emission Limit 1: 8.8500 LB/H
Emission Limit 2: 2.2000 T/YR
Standard Emission: BACT-PSD
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

Pollutant/Compliance Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

POLUTANT NAME: NOX  CAS Number: 10102
Emission Limit 1: 1.1300 LB/H
Emission Limit 2: 0.2800 T/YR
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

Pollutant/Compliance Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

POLUTANT NAME: SO2  CAS Number: 7446-09-5
Emission Limit 1: 6.5000 LB/H
Emission Limit 2: 1.6000 T/YR
Case-by-Case Basis: BACT-PSD
Control Method: (P) SULFUR CONTENT IN THE FUEL LIMITED TO 0.05% BY WEIGHT

Pollutant/Compliance Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

POLUTANT NAME: VOC  CAS Number: VOC
Emission Limit 1: 1.2100 LB/H
Emission Limit 2: 0.3200 T/YR
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

Pollutant/Compliance Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

Process/Pollutant Information

PROCESS NAME: IC ENGINE, FIRE WATER PUMP
Process Type: 10.5900 LB/H
Primary Fuel: DIESEL
Throughput: 55.00 hp
Process Notes: LIMITED TO 500 HOURS OF OPERATION PER YEAR

POLUTANT NAME: CO  CAS Number: 630-08-0
Emission Limit 1: 4.4300 LB/H
Emission Limit 2: 1.1100 T/YR
Standard Emission: 23.6000 G/BHP-H CALCULATED
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

Pollutant/Compliance Notes: LIMITED TO 500 HOURS OF OPERATION A YEAR

POLUTANT NAME: NOX  CAS Number: 10102
Emission Limit 1: 10.5900 LB/H
Emission Limit 2: 2.8000 T/YR
Standard Emission: 56.0000 G/BHP-H CALCULATED
Case-by-Case Basis: BACT-PSD
Control Method: (P) COMBUSTION CONTROLS WITH OPERATIONAL LIMITATIONS

Pollutant/Compliance Notes: (P) GOOD COMBUSTION PRACTICES

POLUTANT NAME: PM10  CAS Number: PM
Emission Limit 1: 0.5600 LB/H
Emission Limit 2: 0.1400 T/YR
Case-by-Case Basis: BACT-PSD
Control Method: (P) GOOD COMBUSTION PRACTICES

Pollutant/Compliance Notes: (P) GOOD COMBUSTION PRACTICES

POLUTANT NAME: SO2  CAS Number: 7446-09-5
Emission Limit 1: 3.3000 LB/H
Emission Limit 2: 0.8250 T/YR
Case-by-Case Basis: BACT-PSD
Other Applicable Requirements: SIP
<table>
<thead>
<tr>
<th>POLLUTANT NAME:</th>
<th>VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS Number:</td>
<td>VOC</td>
</tr>
<tr>
<td>Emission Limit 1:</td>
<td>0.6400 LB/H</td>
</tr>
<tr>
<td>Emission Limit 2:</td>
<td>0.1600 TYR</td>
</tr>
<tr>
<td>Case-by-Case Basis:</td>
<td>BACT-PSD</td>
</tr>
<tr>
<td>Control Method:</td>
<td>(P) GOOD COMBUSTION PRACTICES</td>
</tr>
</tbody>
</table>
### Facility Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RLBC ID</td>
<td>WY-0057 (final)</td>
</tr>
<tr>
<td>Corporate/Company Name</td>
<td>BLACK HILLS CORPORATION</td>
</tr>
<tr>
<td>Facility Name</td>
<td>WYGEN 2</td>
</tr>
<tr>
<td>Facility Contact</td>
<td>FRED CAR</td>
</tr>
<tr>
<td>Facility Description</td>
<td>500 MW PC POWER PLANT</td>
</tr>
<tr>
<td>Permit Number</td>
<td>CT-3030</td>
</tr>
<tr>
<td>Permit Date</td>
<td>09/25/2002 (actual)</td>
</tr>
<tr>
<td>SIC Code</td>
<td>4911</td>
</tr>
<tr>
<td>NAICS</td>
<td>22111.2</td>
</tr>
</tbody>
</table>

### Process/Pollutant Information

#### PROCESS NAME: BOILER, 500 MW PC

<table>
<thead>
<tr>
<th>Pollutant Name</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOX</td>
<td>10102</td>
<td>0.0700 LB/MMBTU</td>
<td>0.0700 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) SEMI-DRY LINE SPRAY DRYER ABSORBER</td>
</tr>
<tr>
<td>SOX</td>
<td>7446</td>
<td>0.1000 LB/MMBTU</td>
<td>0.1000 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) SEMI-DRY LINE SPRAY DRYER ABSORBER</td>
</tr>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0120 LB/MMBTU</td>
<td>0.0120 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) SEMI-DRY LINE SPRAY DRYER ABSORBER</td>
</tr>
<tr>
<td>CO</td>
<td>630-08-0</td>
<td>0.1500 LB/MMBTU</td>
<td>0.1500 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) SEMI-DRY LINE SPRAY DRYER ABSORBER</td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>0.0100 LB/MMBTU</td>
<td>0.0100 LB/MMBTU</td>
<td>BACT-PSD</td>
<td>(A) SEMI-DRY LINE SPRAY DRYER ABSORBER</td>
</tr>
</tbody>
</table>

#### PROCESS NAME: COAL HANDLING EQUIPMENT

<table>
<thead>
<tr>
<th>Pollutant Name</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0090 GR/DSCF</td>
<td>0.0090 GR/DSCF</td>
<td>BACT-PSD</td>
<td>(A) FABRIC FILTER</td>
</tr>
</tbody>
</table>

#### PROCESS NAME: MATERIAL HANDLING EQUIPMENT, OTHER

<table>
<thead>
<tr>
<th>Pollutant Name</th>
<th>CAS Number</th>
<th>Emission Limit 1</th>
<th>Standard Emission</th>
<th>Case-by-Case Basis</th>
<th>Control Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>PM</td>
<td>0.0000 GR/DSCF</td>
<td>0.0000 GR/DSCF</td>
<td>BACT-PSD</td>
<td>(A) FABRIC FILTER</td>
</tr>
</tbody>
</table>
**Facility Information**

<table>
<thead>
<tr>
<th>Facility Contact</th>
<th>KEN DANTZLER  8437618000  <a href="mailto:KSDANTZL@SANTEECOOPER.COM">KSDANTZL@SANTEECOOPER.COM</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>FRS Number</td>
<td>1.10017E+11</td>
</tr>
<tr>
<td>EPA Region</td>
<td>4</td>
</tr>
<tr>
<td>Facility State</td>
<td>SC</td>
</tr>
</tbody>
</table>

**Process/Pollutant Information**

<table>
<thead>
<tr>
<th>Process Type</th>
<th>11.110 (Coal includes bituminous, subbituminous, anthracite, and lignite)</th>
</tr>
</thead>
</table>

**Pollutant Name**: PM  
**CAS Number**: PM  
**Standard Emission**: 0.0015 LB/MMBTU  
**Control Method**: (A) ESP  
**Pollutant/Compliance Notes**: NSPS LIMIT IS 0.03 LB/MMBTU

**Pollutant Name**: CO  
**CAS Number**: 630-08-0  
**Standard Emission**: 0.1600 LB/MMBTU  
**Control Method**: (A) ESP  
**Pollutant/Compliance Notes**: GOOD COMBUSTION PRACTICE

**Pollutant Name**: VOC  
**CAS Number**: VOC  
**Standard Emission**: 0.0024 LB/MMBTU  
**Control Method**: (P) GOOD COMBUSTION PRACTICE  
**Pollutant/Compliance Notes**: REVIEW INCLUDES PSD BACT AND LAER LIMIT OF 0.0024 LB VOC/MMBTU

**Pollutant Name**: SO2  
**CAS Number**: 7446-09-6  
**Emission Limit 1**: 0.01330 LB/MMBTU  
**Standard Emission**: 0.01330 LB/MMBTU  
**Control Method**: (A) ESP  
**Pollutant/Compliance Notes**: FLUE GAS DESULFURIZATION (WET SCRUBBING)  
**Est. % Efficiency**: 95  
**Pollutant/Compliance Notes**: 0.13 LB/MM BTU (365 DAY AVERAGE) AND 95% REMOVAL EFFICIENCY ARE PSD AVOIDANCE LIMITS. THE 3250 TPY LIMIT (365 DAY AVERAGE) IS FOR EACH BOILER. THE 0.6 LB/MMBTU NSPS LIMIT IS 0.03 LB/MMBTU

**Pollutant Name**: H2SO4 MIST  
**CAS Number**: 7664-93-9  
**Emission Limit 1**: 0.0014 LB/MMBTU  
**Standard Emission**: 0.0014 LB/MMBTU  
**Control Method**: (A) ESP  
**Pollutant/Compliance Notes**: FLUE GAS DESULFURIZATION (WET SCRUBBING)  
**Est. % Efficiency**: 95  
**Pollutant/Compliance Notes**: THE 0.0014 LB/MMBTU H2SO4 LIMIT IS A PSD AVOIDANCE LIMIT AND IS BASED ON A 365 DAY AVERAGE

**Pollutant Name**: NOX  
**CAS Number**: 10102  
**Standard Emission**: 0.0030 LB/MMBTU  
**Control Method**: (B) LOW NOX BURNERS AND SCR  
**Pollutant/Compliance Notes**: The boilers are subject to a PSD BACT lead limit of 0.0000169 LB/MMBTU

**Pollutant Name**: Pb  
**CAS Number**: 7439-93-1  
**Emission Limit 1**: 1.6900 E-5 LB/MMBTU See Pollutant Notes  
**Control Method**: (A) ESP  
**Pollutant/Compliance Notes**: THE BOILERS ARE SUBJECT TO A PSD BACT MERCURY LIMIT OF 0.0000036 LB/MMBTU, WHICH IS ALSO A 112G MACT LIMIT
POLLUTANT NAME: HCL  CAS Number: 7647-01-0
Emission Limit 1: 0.0024 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (A) FLUE GAS DESULFURIZATION (WET SCRUBBING)
Est. % Efficiency: 95
Pollutant/Compliance Notes: The HCL PSD BACT hydrochloric acid limit is also a 112g MACT limit.

POLLUTANT NAME: HF  CAS Number: 7664-39-3
Emission Limit 1: 0.0003 LB/MMBTU
Case-by-Case Basis: BACT-PSD
Control Method: (A) FLUE GAS DESULFURIZATION (WET SCRUBBING)
Est. % Efficiency: 95
Pollutant/Compliance Notes: The PSD BACT HF limit is also a 112g MACT limit.

POLLUTANT NAME: Beryllium  CAS Number: 7440-41-7
Emission Limit 1: 8.4400 E-7 LB/MMBTU See Pollutant Notes
Case-by-Case Basis: BACT-PSD
Control Method: (A) ESP
Est. % Efficiency: 99.75
Pollutant/Compliance Notes: The boilers are subject to a Beryllium PSD BACT limit of 0.000000844, which is also a 112g MACT limit.

POLLUTANT NAME: SB  CAS Number: 7440-36-0
Emission Limit 1: 7.0000 E-7 LB/MMBTU See Pollutant Notes
Case-by-Case Basis: BACT-PSD
Control Method: (A) ESP
Pollutant/Compliance Notes: The boilers are subject to an Antimony PSD BACT limit of 0.0000007 LB/MMBTU, which is also a 112g MACT limit.

Process/Pollutant Information

PROCESS NAME: COAL HANDLING
Process Type: 90.011 [Coal Handling/Processing/Preparation/Cleaning]
Throughput: 2628000.00 T/YR
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 1.4000 LB/H EACH UNIT
Standard Emission: SEE NOTE
Case-by-Case Basis: Other Case-by-Case
Control Method: (A) BAGHOUSE
Est. % Efficiency: 99.5
Compliance Verified: UNKNOWN
Pollutant/Compliance Notes: THE COAL HANDLING FACILITY IS SUBJECT TO 40CFR SUBPART Y BUT ONLY FOR OPACITY. STANDARD EMISSION UNIT IS NOT APPLICABLE.

PROCESS NAME: LIMESTONE HANDLING
Process Type: 90.019 [Lime/Limestone Handling/Kilns/Storage/Manufacturing]
Throughput: 230000.00 T/YR
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.0002 LB/H EACH (SIX CONVEYOR DROPS)
Emission Limit 2: 0.0020 GR/DSCF
Standard Emission: 0.0503 G/DSCM CALCULATED
Case-by-Case Basis: BACT-PSD
Control Method: (A) BAGHOUSE
Est. % Efficiency: 99
Pollutant/Compliance Notes: LIMESTONE FACILITIES ARE SUBJECT TO 40CFR SUBPART OOO.

PROCESS NAME: LIMESTONE STORAGE PILE
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.2900 LB/H
Case-by-Case Basis: BACT-PSD
Pollutant/Compliance Notes: FUGITIVE EMISSION. STANDARD EMISSION UNIT IS NOT APPLICABLE.

Process/Pollutant Information

PROCESS NAME: COOLING TOWERS (2)
Process Type: 99.009 [Industrial Process Cooling Towers]
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 1.8600 LB/H Each (Two cooling towers)
Case-by-Case Basis: Other Case-by-Case
Control Method: (N)
Pollutant/Compliance Notes: Fugitive Emissions

PROCESS NAME: LIMESTONE TRUCK UNLOADING
Process Type: 90.019 [Lime/Limestone Handling/Kilns/Storage/Manufacturing]
POLLUTANT NAME: PM  CAS Number: PM
Emission Limit 1: 0.0200 LB/H
Case-by-Case Basis: BACT-PSD
Pollutant/Compliance Notes: FUGITIVE EMISSION. STANDARD EMISSION UNIT IS NOT APPLICABLE.
BEST AVAILABLE TECHNOLOGY (BAT) SUMMARY

For:
AMERICAN MUNICIPAL POWER GENERATING STATION

Submitted By:
AMERICAN MUNICIPAL POWER-OHIO, INC.

May 2006
BEST AVAILABLE TECHNOLOGY (BAT) ANALYSIS
FOR
AMERICAN MUNICIPAL POWER GENERATING STATION

TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAT OVERVIEW</td>
<td>1</td>
</tr>
<tr>
<td>BAT for the AMPGS</td>
<td>1</td>
</tr>
<tr>
<td>Hydrogen Fluoride (HF), Hydrogen Chloride (HCl) and Other Soluble Air Pollutants</td>
<td>2</td>
</tr>
<tr>
<td>Ammonia</td>
<td>3</td>
</tr>
<tr>
<td>Other Organic Pollutants</td>
<td>3</td>
</tr>
<tr>
<td>Trace Metals</td>
<td>3</td>
</tr>
<tr>
<td>AIR TOXICS COMPONENT OF BAT FOR AMPGS</td>
<td>3</td>
</tr>
<tr>
<td>BAT SUMMARY FOR THE AMPGS</td>
<td>4</td>
</tr>
</tbody>
</table>
**BAT OVERVIEW**

OAC rule 3745-31-05 (A)(3) establishes the requirement that, prior to issuing a Permit-to-Install (PTI), the Director of Ohio EPA must determine that the proposed installation will employ the best available technology (BAT).

OAC rule 3745-31-01 defines BAT as follows:

"Best available technology (BAT)" means any combination of work practices, raw material specifications, throughput limitations, source design characteristics, an evaluation of the annualized cost per ton of air pollutant removed, and air pollution control devices that have been previously demonstrated to the director of environmental protection to operate satisfactorily in this state or other states with similar air quality on substantially similar air pollution sources.

While BAT is similar in purpose to Best Available Control Technology (BACT) requirements, BAT is a distinct Ohio-based air permitting requirement that needs to be addressed in any Prevention of Significant Deterioration (PSD) PTI application in addition to addressing BACT. BAT is only required for emission units with the potential to emit one tpy or more of a pollutant with that is not subject to BACT. Therefore, since the AMPGS will have BACT limits for nitrogen oxides ($\text{NO}_x$), sulfur dioxide ($\text{SO}_2$), particulate matter (PM), particulate matter less than 10 microns ($\text{PM}_{10}$), carbon monoxide (CO), volatile organic compounds (VOC) and sulfuric acid ($\text{H}_2\text{SO}_4$), independent BAT emission limits are not required for emissions units that emit those pollutants.

Unlike BACT, BAT limits are proposed in the PTI application itself and not as a result of any specific top-down analysis report. However, AMP-Ohio believes a short BAT summary is helpful, given the size of the PTI application for the American Municipal Power Generating Station (AMPGS).

**BAT FOR THE AMPGS**

The AMPGS must employ BAT for each air pollutant with potential emission rates for the proposed project greater than 1 ton per year (TPY) excluding those pollutants for which BACT is required. The air pollutants that will be emitted by the AMPGS that are subject to the BAT requirement in OAC rule 3745-31-05 (A)(3) are listed below:

- Nitrous Oxide ($\text{N}_2\text{O}$)
- Hydrogen Chloride (HCl)
- Ammonium Sulfate [(NH$_4$)$_2$SO$_4$]
- Hydrogen Fluoride (HF) [Although fluoride is a pollutant with emissions over PSD thresholds, the PSD rules specifically exclude HF. Therefore, HF is an air pollutant for which a BAT analysis is required.]
- Ammonia (NH$_3$)
- Cyanide (CN)*
- Benzene ($\text{C}_6\text{H}_6$)*
- Benzyl Chloride ($\text{C}_7\text{H}_7\text{Cl}$)*
• Isophorone (C9H14O)*
• Acetaldehyde (C2H4O)*
• Methyl Chloride (CH3Cl)*
• Methyl Ethyl Ketone (C4H8O)*
• Propionaldehyde (C3H6O)*

*The inclusion of these pollutants is based on maximum uncontrolled emission rates from AP-42 Table 1.1-14 (9/98). Actual emissions after control will likely be less than 1 TPY for most of these pollutants.

The AMPGS will install and operate an overall air pollution control system consisting of the following components:

• Good Combustion Design and Operation to minimize CO, VOC and Organic Compound emissions;

• Overfire Air, Low-NOx Burners (OFA/LNB) and Selective Catalytic Reduction (SCR) to minimize NOx emissions;

• Pulsejet Baghouse to minimize filterable PM/PM10 emissions;

• Wet Flue Gas Desulfurization (Wet FGD) to minimize SO2 emissions; and

• Wet Electrostatic Precipitator (Wet ESP) to minimize acid gas and condensable PM10 emissions.

The AMPGS overall air pollution control system will serve to minimize emissions of the air pollutants listed above for which BAT will be employed. The following details the equipment utilized to control each BAT pollutant:

**Hydrogen Fluoride (HF), Hydrogen Chloride (HCl) and Other Soluble Air Pollutants**

Fluorine and chlorine are both present in small amounts in coal. Coals mined in the western United States typically have higher amounts of fluorine and chlorine than coals mined in the eastern United States. A small portion of the fluorine and chlorine is retained in the bottom ash of the boiler. The fluorine and chlorine present in the coal reacts during combustion to form emissions of both HF and HCl. The HF and HCl that are present in the boiler flue gases are water soluble and will be effectively controlled by the Wet FGD and Wet ESP control systems that are specified as BACT for the control of SO2 and H2SO4 emissions. The combination of the Wet FGD and Wet ESP control systems constitute BAT for HF and HCl control. The specific BAT emissions rates for HF, HCl and the other water soluble air pollutants present in the flue gases at a rate of 1 TPY or more are presented in the permit application.
### Ammonia

The SCR system that is employed to reduce NOx emissions from the two main boilers (B001 and B002) will employ ammonia to react with the NOx in the flue gases. The SCR system could either employ ammonia that is stored on site or be provided ammonia that is produced on site from urea.

Any excess ammonia which is not reacted in the SCR control system is emitted. The release of this excess ammonia is referred to as “ammonia slip”. The amount of the “ammonia slip” at the AMPGS will be minimized through the proper design and operation of the SCR control system. The specific BAT emissions rates for ammonia are presented in the permit application.

If the amount of ammonia present on site is projected to exceed the threshold quantity for regulated toxic substances for accidental release prevention, the AMPGS will prepare a risk management plan (RMP) pursuant to the requirements in OAC §3745-104. An approved RMP will be in place prior to the date that the threshold quantity of ammonia is present on site.

### Other Organic Pollutants

Organic emissions are attributable to incomplete combustion. The design of modern pulverized coal-fired boilers maximizes the efficiency of combustion and thereby minimizes the uncontrolled rate of CO, VOC and other organic emissions. This is accomplished through the proper design and operation of the combustion air delivery systems. The specific BAT emissions rates for the organic constituents of the flue gases at a rate of 1 TPY or more are presented in the permit application.

### Trace Metals

Metals are present in small amounts in coal. As with the other constituents, a small portion of these metals are retained in the bottom ash of the boiler. The trace metal compounds that are present in the boiler flue gases will be controlled by the baghouse, Wet FGD and Wet ESP control systems that are specified as BACT for the control of total (filterable + condensable) PM10, SO2 and H2SO4 emissions. The combination of the baghouse, Wet FGD and Wet ESP control systems constitute BAT for trace metals control. The specific BAT emissions rates for the trace metals that are present in the flue gases at a rate of 1 TPY or more are presented in the permit application.

### AIR TOXICS COMPONENT OF BAT FOR AMPGS

An analysis of each of the BAT pollutants has been performed consistent with the requirements of Ohio EPA’s “Air Toxic Policy” (ATP). The results of the ATP analysis are presented in the air quality modeling report that accompanies AMPGS’s permit application. The ATP analysis concluded that the maximum predicted off-site concentration is less than the Maximum

---

1 OAC rule 3745-104-04 includes a threshold of 10,000 pounds for anhydrous ammonia and a threshold of 20,000 pounds for ammonia at a concentration of 20% or greater. The CAS number for ammonia is 7664-41-7.
Acceptable Ground Level Concentration (MAGLC) for each air pollutant for which an ATP analysis is required.

**BAT SUMMARY FOR THE AMPGS**

AMPGS will employ an overall air pollution control system, consisting of: Good Combustion Design and Operation, OFA, LNB, SCR, Baghouse, Wet FGD and Wet ESP. This overall system represents both BACT and BAT for AMPGS. In addition, the permit application for the AMPGS proposes BAT emission limits compliant with the requirements of O.A.C. §3745-31-01 and §3745-31-05. Finally, the AMPGS will not violate any of Ohio’s air toxics requirements pursuant to the ATP. As such, the AMPGS will employ BAT.