


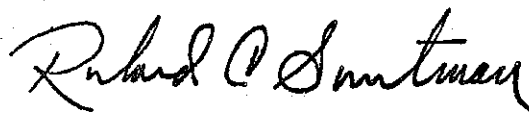
Permit #: 28.0801-29

Effective Date: June 9, 2009

Expiration Date: June 9, 2014

The seal of the State of South Dakota is a circular emblem with a serrated outer edge. It features a central landscape with a river, mountains, and a sun. The text "STATE OF SOUTH DAKOTA" is written around the top inner edge, and "1889" is at the bottom. The motto "UNDER GOD THE PEOPLE RULE" is inscribed in a smaller circle within the seal.

**SOUTH DAKOTA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES  
TITLE V AIR QUALITY PERMIT  
AND  
ACID RAIN PERMIT**

A handwritten signature in cursive script that reads "Richard C. Sweetman".

Richard C. Sweetman, Chairman  
Board of Minerals and Environment

## **Under the South Dakota Air Pollution Control Regulations**

Pursuant to Chapter 34A-1-21 of the South Dakota Codified Laws and the Air Pollution Control Regulations of the State of South Dakota and in reliance on statements made by the owner designated below, a permit to operate is hereby issued by the Secretary of the Department of Environment and Natural Resources. This permit authorizes such owner to operate the unit(s) listed in Table 1-1 under the listed conditions.

### A. Owners

#### 1. Company Names and Mailing Addresses

Montana-Dakota Utilities Co. a Division of MDU Resources Group  
400 North Fourth Street  
Bismarck, North Dakota 58501

Northwestern Energy  
600 Market Street  
Huron, South Dakota 57350

Otter Tail Corporation d.b.a. Otter Tail Power Company  
Operator of Big Stone I  
215 South Cascade Street  
PO Box 496  
Fergus Falls, Minnesota 56538-0496

#### 2. Actual Source Location if Different from Above

Portions of Section 11 and 13, Township 121N Range 47W and  
Section 7 Township 121N Range 46W, Grant County

48450 144<sup>th</sup> Street  
Big Stone City, South Dakota

#### 3. Permit Contact

Terry Graumann; Manager, Environmental Services  
(218) 739-8407

#### 4. Facility Contact

Terry Graumann; Manager, Environmental Services  
(218) 739-8407

5. Responsible Official

Terry Graumann; Manager, Environmental Services  
(218) 739-8407

B. Permit Revisions or Modifications

Not applicable

C. Type of Operation

An electrical generation facility

# TABLE OF CONTENTS

---

	Page
<b>1.0 STANDARD CONDITIONS.....</b>	<b>1</b>
1.1 Construction and operation of source.....	1
1.2 Duty to comply. ....	2
1.3 Property rights or exclusive privileges.....	3
1.4 Penalty for violating a permit condition. ....	3
1.5 Inspection and entry. ....	3
1.6 Severability. ....	3
1.7 Permit termination, modification, or revocation. ....	3
1.8 Credible evidence. ....	4
<b>2.0 PERMIT FEES.....</b>	<b>4</b>
2.1 Annual air fee required. ....	4
2.2 Annual operational report. ....	4
2.3 Annual air fee. ....	4
<b>3.0 PERMIT AMENDMENT AND MODIFICATION CONDITIONS.....</b>	<b>4</b>
3.1 Permit flexibility. ....	5
3.2 Administrative permit amendment. ....	5
3.3 Minor permit amendment.....	5
3.4 Permit modification. ....	6
3.5 Permit revision. ....	6
3.6 Testing new fuels or raw materials. ....	6
<b>4.0 PERMIT RENEWAL REQUIREMENTS .....</b>	<b>7</b>
4.1 Permit effective. ....	7
4.2 Permit renewal. ....	7
4.3 Permit expiration. ....	7
<b>5.0 RECORD KEEPING AND REPORTING REQUIREMENTS .....</b>	<b>7</b>
5.1 Record keeping and reporting. ....	7
5.2 Signatory requirements.....	7
5.3 Certification statement. ....	8
5.4 Monitoring log.....	8
5.5 Monthly records.....	9
5.6 Annual records.....	10
5.7 Initial startup notification. ....	10
5.8 Initial commercial startup notification.....	10
5.9 Quarterly reports.....	10
5.10 Annual compliance certification.....	11
5.11 Reporting permit violations. ....	12

# TABLE OF CONTENTS

---

	Page
5.12	Operational records.....12
<b>6.0</b>	<b>CONTROL OF REGULATED AIR POLLUTANTS ..... 12</b>
6.1	Visibility limit.....12
6.2	Visibility exceedances. ....12
6.3	Total suspended particulate matter limits.....13
6.4	Sulfur dioxide limits.....13
6.5	PM10 emission limits. ....14
6.6	Approved alternative fuels and wastes for Unit #1.....14
6.7	Limitations on approved alternative fuels and wastes for Unit #1.....15
6.8	Unit #1 operating requirements for certain alternative fuels and wastes. ....16
6.9	Co-fired combustor qualification. ....16
6.10	New source performance standard for coal preparation plants.....16
6.11	New source performance standard for stationary compression ignition internal combustion engines. ....16
6.12	Air emission exceedances – emergency conditions. ....16
6.13	Circumvention not allowed. ....17
6.14	Minimizing emissions. ....17
<b>7.0</b>	<b>PERFORMANCE TESTS..... 17</b>
7.1	Performance test may be required. ....17
7.2	Test methods and procedures. ....17
7.3	Representative performance test.....17
7.4	Submittal of test plan.....17
7.5	Notification of test.....18
7.6	Performance test report. ....18
7.7	Initial performance test for PM10.....18
7.8	Initial performance test for nitrogen oxide. ....18
7.9	Initial sulfur content of liquid fuel for Unit #2, #3 and #4. ....18
7.10	Initial sulfur content test of liquid fuel for Unit #14 #15, #25 and .....19
7.11	Periodic performance test for Unit #1.....19
7.12	Periodic performance test for hazardous air pollutants. ....19
<b>8.0</b>	<b>MONITORING ..... 21</b>
8.1	Periodic monitoring for opacity limits. ....21
8.2	Certified personnel – visible emission tests. ....22
8.3	Monitoring sulfur content of distillate oil.....22
8.4	Continuous emission monitoring systems.....23
8.5	Performance specifications and quality assurance. ....23
8.6	Compliance assurance monitoring. ....23

## TABLE OF CONTENTS

---

	Page
<b>9.0 PSD EXEMPTION .....</b>	<b>24</b>
<b>9.1 PM10 emission limit – Unit #12. ....</b>	<b>24</b>
<b>9.2 Sulfur dioxide limit. ....</b>	<b>24</b>
<b>9.3 Sulfur dioxide monthly emission calculations. ....</b>	<b>25</b>
<b>9.4 Sulfur content limit for liquid fuel. ....</b>	<b>26</b>
<b>9.5 Nitrogen oxide limit. ....</b>	<b>26</b>
<b>9.6 Nitrogen oxide monthly emission calculations. ....</b>	<b>27</b>
<b>9.7 Short term nitrogen oxide emission limits. ....</b>	<b>28</b>
<b>9.8 Unit #1 operational limits. ....</b>	<b>28</b>
<b>9.9 Operational limit for Units #2, #3, and #4. ....</b>	<b>29</b>
<b>9.10 Operational limit for Units #14, #15, #25 and #33. ....</b>	<b>29</b>
<b>10.0 ACID RAIN PROGRAM .....</b>	<b>29</b>
<b>10.1 Acid rain sulfur dioxide requirements for Unit #1. ....</b>	<b>29</b>
<b>10.2 Acid rain nitrogen oxide requirements for Unit #1. ....</b>	<b>29</b>
<b>11.0 HAZARDOUS AIR POLLUTANT EMISSION LIMITS .....</b>	<b>29</b>
<b>11.1 Plantwide mercury emission limit. ....</b>	<b>29</b>
<b>11.2 Unit #13 mercury emission limit. ....</b>	<b>30</b>
<b>11.3 Unit #13 hydrogen fluoride emission limit. ....</b>	<b>30</b>
<b>11.4 Unit #13 hydrogen chloride emission limit. ....</b>	<b>30</b>
<b>11.5 Unit wide hazardous air pollutant limit for Unit #13. ....</b>	<b>30</b>
<b>11.6 Continuous mercury emission monitoring system. ....</b>	<b>31</b>
<b>11.7 Unit #13 coal analysis. ....</b>	<b>31</b>
<b>11.8 Monthly hazardous air pollutant emission calculation. ....</b>	<b>31</b>
<b>11.9 Unit #13 case-by-case MACT exemption. ....</b>	<b>33</b>
<b>12.0 PSD NEW SOURCE PERFORMANCE STANDARDS .....</b>	<b>33</b>
<b>12.1 New source performance standard for coal preparation plants. ....</b>	<b>33</b>
<b>12.2 New source performance standard for stationary compression ignition         internal combustion engines. ....</b>	<b>33</b>
<b>12.3 New source performance standard for Unit #13. ....</b>	<b>33</b>
<b>12.4 New source performance standard for nonmetallic mineral process         plants. ....</b>	<b>34</b>
<b>13.0 PSD GENERAL REQUIREMENTS .....</b>	<b>35</b>
<b>13.1 Construction and operation of source. ....</b>	<b>35</b>
<b>13.2 Final design changes. ....</b>	<b>36</b>
<b>13.3 Commence construction. ....</b>	<b>36</b>
<b>13.4 Submit operating permit application. ....</b>	<b>37</b>

# TABLE OF CONTENTS

---

	Page
13.5	Submit acid rain permit application. ....37
13.6	Construction date notification. ....37
13.7	Initial startup notification. ....37
13.8	Coal handling operational limits. ....37
13.9	Acid rain requirements for Unit #13. ....37
13.10	Initial performance test for Unit #13. ....37
13.11	Initial performance test for Unit #14, #15, #25 and #33. ....38
13.12	Initial performance test for other units. ....38
13.13	Initial certification of continuous emission monitoring system. ....39
13.14	Continuous emission monitoring systems. ....39
13.15	Performance specifications and quality assurance. ....39
13.16	State opacity limit. ....39
14.0	PSD BEST AVAILABLE CONTROL TECHNOLOGY (BACT) LIMITS. .... 39
14.1	BACT limits for particulate matter. ....40
14.2	BACT limits for carbon monoxide. ....41
14.3	BACT limits for volatile organic compounds as carbon. ....41
14.4	BACT limit for sulfuric acid mist. ....42
14.5	BACT limit for fluoride. ....42
14.6	Paved roads and parking lots. ....42
14.7	Cooling tower. ....43
14.8	Compliance with BACT limits during startup, shutdown, and malfunction. ....43
15.0	PSD FUGITIVE DUST CONTROLS ..... 43
15.1	Paved road and parking area controls. ....43
15.2	Open storage pile control. ....43
15.3	Waste pit controls. ....44
15.4	Opacity limit for fugitive sources. ....44
15.5	Record keeping requirements for fugitive sources. ....44
16.0	MONITORING PLAN ..... 45
16.1	Operation, maintenance, and monitoring plan. ....45

## 1.0 STANDARD CONDITIONS

**1.1 Construction and operation of source.** In accordance with Administrative Rules of South Dakota (ARSD) 74:36:05:16.01(8), the owner or operator shall construct and operate the units, controls, and processes as described in Table 1-1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated June 4, 2001, July 20, 2005, and June 20, 2006, unless modified by the conditions of this permit. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted. The control equipment shall be operated in a manner that achieves compliance with the conditions of this permit at all times.

*Table 1-1 – Description of Permitted Units, Operations, and Processes*

Unit	Description	Operating Rate	Control Device
#1	1975 Babcock & Wilcox Company balanced draft, cyclone-fired steam boiler that is used to produce electricity and provide steam to an ethanol plant. The boiler is equipped with an over-fire air system and fired on subbituminous coal and alternative fuels and wastes as noted under the terms of this permit.	5,609 million Btus per hour	Baghouse  The exhaust gases from the baghouse shall be routed to the wet flue gas desulfurization system associated with Unit #13 as noted under the terms of this permit.
#2	1973 Combustion Engineering auxiliary steam boiler, Model #31-A014. The boiler is fired with distillate oil and biodiesel.	210 million Btus per hour heat input	Not applicable
#3	1961 Bros steam heating boiler, Model #461-03. The boiler is fired with distillate oil and biodiesel.	98 million Btus per hour heat input	Not applicable
#4	1974 Waukesha Power Systems emergency diesel generator, Model #VHP5900 DSIU. The diesel generator is fired with distillate oil and biodiesel.	1,000 kilowatts heat output	Not applicable
#5 <sup>1</sup>	Live fuel storage building and transfer point.	3,000 tons per hour	Baghouse
#6 <sup>1</sup>	Rotary car dumper conveyor.	3,000 tons per hour	Baghouse



<b>Unit</b>	<b>Description</b>	<b>Operating Rate</b>	<b>Control Device</b>
<b>#7a</b>	Rotary car dumper building.	3,000 tons per hour. The maximum capacity may increase to 3,600 tons per hour during the term of this permit.	Baghouse
<b>#7b</b>			Baghouse
<b>#7c</b>			Baghouse
<b>#7d</b>			Baghouse
<b>#8</b>	Fuel transfer house.	1,100 tons per hour	Baghouse
<b>#9</b>	North fuel conveying system and silo vents.	550 tons per hour	A set of baghouses
<b>#10</b>	South fuel conveying system, silo vents, and plant distribution bin.	550 tons per hour	A set of baghouses
<b>#11</b>	Fly ash storage silo.	19 tons per hour	Baghouse. A second baghouse is installed as a back-up.
<b>#12</b>	Lime storage silo.	15 tons per hour	Baghouse
<b>The following units may be installed and operated during the term of this permit.</b>			
<b>#13</b>	Super-critical pulverized coal fired boiler fired on subbituminous coal, ultra low sulfur diesel, or biodiesel. The super-critical pulverized coal fired boiler will be equipped with low NOx burners.	6,000 million Btus per hour heat input <sup>2</sup>	Baghouse, wet flue gas desulfurization, and selective catalytic reduction.
<b>#14</b>	Fire pump fired on ultra low sulfur diesel and/or biodiesel.	420 horsepower <sup>2</sup>	Catalyzed diesel particulate filter
<b>#15</b>	Generator fired on ultra low sulfur diesel and/or biodiesel.	2,220 kilowatts <sup>2</sup>	Catalyzed diesel particulate filter
<b>#25</b>	Booster pump (boiler) fired on ultra low sulfur diesel and/or biodiesel.	225 horsepower <sup>2</sup>	Catalyzed diesel particulate filter
<b>#33</b>	Booster pump (coal area) fired on ultra low sulfur diesel and/or biodiesel.	225 horsepower <sup>2</sup>	Catalyzed diesel particulate filter

<sup>1</sup> – Unit #5 and #6 shall be shutdown and no longer operated on or after the initial startup of Unit #13; and

<sup>2</sup> – The operating rate is the nominal or manufacturer listed operating rate noted in the PSD application and is descriptive only.

**1.2 Duty to comply.** In accordance with ARSD 74:36:05:16.01(12), the owner or operator shall comply with the conditions of this permit. An owner or operator who knowingly makes a

false statement in any record or report or who falsifies, tampers with, or renders inaccurate, any monitoring device or method is in violation of this permit. A violation of any condition in this permit is grounds for enforcement, reopening this permit, permit termination, or denial of a permit renewal application. The owner or operator, in an enforcement action, cannot use the defense that it would have been necessary to cease or reduce the permitted activity to maintain compliance. The owner or operator shall provide any information requested by the Secretary to determine compliance or whether cause exists for reopening or terminating this permit.

**1.3 Property rights or exclusive privileges.** In accordance with ARSD 74:36:05:16.01(12), the State's issuance of this permit, adoption of design criteria, and approval of plans and specifications does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the owner's or operator's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The owner or operator is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

**1.4 Penalty for violating a permit condition.** In accordance with South Dakota Codified Laws (SDCL) 34A-1, a violation of a permit condition may subject the owner or operator to civil or criminal prosecution, a state penalty of not more than \$10,000 per day per violation, injunctive action, administrative permit action, and other remedies as provided by law.

**1.5 Inspection and entry.** In accordance with SDCL 34A-1-41, the owner or operator shall allow the Secretary to:

1. Enter the premises where a regulated activity is located or where pertinent records are stored;
2. Have access to and copy any records that are required under this permit;
3. Inspect operations regulated under this permit; and/or
4. Sample or monitor any substances or parameters for the purpose of assuring compliance.

**1.6 Severability.** In accordance with ARSD 74:36:05:16.01(11), any portion of this permit that is void or challenged shall not affect the validity of the remaining permit requirements.

**1.7 Permit termination, modification, or revocation.** In accordance with ARSD 74:36:05:46, the Secretary may recommend that the Board of Minerals and Environment

terminate, modify, or revoke this permit for violations of SDCL 34A-1 or the federal Clean Air Act or for nonpayment of any outstanding fee or enforcement penalty.

**1.8 Credible evidence.** In accordance with ARSD 74:36:13:07, credible evidence may be used for the purpose of establishing whether the owner or operator has violated or is violation of this permit. Credible evidence is as follows:

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at the source:
  - a. A monitoring method approved for the source pursuant to 40 CFR § 70.6(a)(3) and incorporated in this permit; or
  - b. Compliance methods specified in an applicable plan;
2. The following testing, monitoring, or information gathering methods are presumptively credible testing, monitoring, or information-gathering methods:
  - a. Any monitoring or testing methods approved in this permit, including those in 40 CFR Parts 51, 60, 61, and 75; or
  - b. Other testing, monitoring, or information-gathering methods that produce information comparable to that produced by any method in section (1) or (2)(a).

## **2.0 PERMIT FEES**

**2.1 Annual air fee required.** In accordance with ARSD 74:36:05:06.01(15), the owner or operator shall submit an annual administrative fee and an annual fee. The fee is based on actual emissions in accordance with ARSD 74:37.

**2.2 Annual operational report.** In accordance with ARSD 74:37:01:06, the Secretary will supply the owner or operator with an annual operational report in January of each year. The owner or operator shall complete and submit the operational report to the Secretary by March 1 of each year. The responsible official shall sign the operational report in the presence of a notary public.

**2.3 Annual air fee.** In accordance with ARSD 74:37:01:08, the Secretary will notify the owner or operator of the required annual air emission fee and administrative fee by June 1 of each year. The fees shall accrue on July 1 and are payable to the Department of Revenue by July 31 of each year.

## **3.0 PERMIT AMENDMENT AND MODIFICATION CONDITIONS**

**3.1 Permit flexibility.** In accordance with ARSD 74:36:05:30, the owner or operator shall have the flexibility to make changes to the source during the term of this permit. The owner or operator shall provide the Secretary written notice at least seven days in advance of the proposed change (NOTE: The Secretary will forward a copy of the written notice to EPA). The written notice shall include a brief description of the change, the date on which the change is to occur, any change in emissions, and the proposed changes to this permit.

The Secretary will notify the owner or operator whether the change is an administrative permit amendment, a minor permit amendment, or a permit modification. A proposed change that is considered an administrative permit amendment or a minor permit amendment can be completed immediately after the Secretary receives the written notification. The owner or operator must comply with both the applicable requirements governing the change and the proposed permit terms and conditions until the Secretary takes final action on the proposed change.

A proposed change that is considered a modification can not be constructed until the Secretary takes final action on the proposed change. Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except that the required review shall cover only the proposed changes.

**3.2 Administrative permit amendment.** In accordance with ARSD 74:36:05:33, the Secretary has 60 days from receipt of a written notice to verify that the proposed change is an administrative permit amendment. The Secretary considers a proposed change an administrative permit amendment if the proposed change accomplishes one of the following:

1. Corrects typographical errors;
2. Changes the name, address, or phone number of any person identified in this permit or provides a similar minor administrative change at the source;
3. Requires more frequent monitoring or reporting by the source;
4. The ownership or operational control of a source change and the Secretary determines that no other change in this permit is necessary. However, the new owner must submit a certification of applicant form and a written statement specifying the date for transfer of operating permit responsibility, coverage, and liability; or
5. Any other changes that the Secretary and the administrator of EPA determines to be similar to those requirements in this condition.

**3.3 Minor permit amendment.** In accordance with ARSD 74:36:05:38, the Secretary has 90 days from receipt of a written notice or 15 days after the end of EPA's 45-day review period, whichever is later, to take final action on a minor permit amendment. Final action consists of issuing or denying a minor permit amendment or determining that the proposed change is a permit modification. The Secretary considers a proposed change to be a minor permit amendment if the proposed change:

1. Does not violate any applicable requirements;

2. Does not involve significant changes to existing monitoring, reporting, or record keeping requirements;
3. Does not require or change a case-by-case determination of an emission limit or other standard, a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; or
4. Does not seek to establish or change a permit term or condition for which the source has assumed to avoid an applicable requirement, a federally enforceable emission cap, or an alternative emission limit. An alternative emission limit is approved pursuant to regulations promulgated under section 112(i)(5) of the federal Clean Air Act.

**3.4 Permit modification.** In accordance with ARSD 74:36:05:39, an owner or operator may apply for a permit modification. A permit modification is any proposed change that meets the definition of a modification in ARSD 74:36:01:10 or is not an administrative amendment or a minor permit amendment. Modification is defined as a physical change or change in operation that increases the amount of air pollutant emitted by the source or results in the emission of an air pollutant not previously emitted. Permit modifications are subject to the same procedural requirements, including public comment, as the original permit issuance except that the required review shall cover only the proposed changes.

**3.5 Permit revision.** In accordance with ARSD 74:36:05:40, the Secretary may reopen and revise this permit to meet requirements of SDCL 34A-1 or the federal Clean Air Act.

**3.6 Testing new fuels or raw materials.** In accordance with ARSD 74:36:11:04, an owner or operator may request permission to test a new fuel or raw material to determine if it is compatible with existing equipment before requesting a permit amendment or modification. A complete test proposal shall consist of the following:

1. A written proposal that describes the new fuel or raw material, operating parameters, and parameters that will be monitored and any testing associated with air pollutant emissions during the test;
2. An estimate of the type and amount of regulated air pollutant emissions that will result from the proposed change; and
3. The proposed schedule for conducting the test. In most cases the owner or operator will be allowed to test for a maximum of one week. A request for a test period longer than one week will need additional justification. A test period shall not exceed 180 days.

The Secretary shall approve, conditionally approve, or deny in writing the test proposal within 45 days after receiving a complete proposal. Approval conditions may include changing the test schedule, pollutant sampling, and/or analysis methods. Pollutant sampling and analysis methods may include, but are not limited to performance testing, visible emission evaluation, fuel analysis, dispersion modeling, and monitoring of raw material or fuel rates.

If the Secretary determines that the proposed change will result in an increase in the emission of a regulated air pollutant or result in the emission of an additional regulated air pollutant, the Secretary shall give public notice of the proposed test for 30 days. The Secretary shall consider all comments received during the 30-day public comment period before making a final decision on the test.

The Secretary will not approve a test if the test would cause or contribute to a violation of a national ambient air quality standard.

#### **4.0 PERMIT RENEWAL REQUIREMENTS**

**4.1 Permit effective.** In accordance with ARSD 74:36:05:07, this permit shall expire five years from date of issuance unless reopened or terminated for cause.

**4.2 Permit renewal.** In accordance with ARSD 74:36:05:08, the owner or operator shall submit an application for a permit renewal at least 180 days before the date of permit expiration if the owner or operator wishes to continue an activity regulated by this permit. The current permit shall not expire and shall remain in effect until the Secretary takes final action on the timely permit renewal application.

**4.3 Permit expiration.** In accordance with ARSD 74:36:05:28, permit expiration terminates the owner's or operator's right to operate any unit covered by this permit.

#### **5.0 RECORD KEEPING AND REPORTING REQUIREMENTS**

**5.1 Record keeping and reporting.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or application. The records shall be maintained on-site for the first two years and may be maintained off-site for the last three years. All records must be made available to the Secretary for inspection. All notifications and reports shall be submitted to the following address:

South Dakota Department of Environment and Natural Resources  
PMB 2020, Air Quality Program  
523 E. Capitol, Joe Foss Building  
Pierre, SD 57501-3182

**5.2 Signatory requirements.** In accordance with ARSD 74:36:05:12(17), all applications submitted to the Secretary shall be signed and certified by a responsible official. A responsible

official for a corporation is a responsible corporate officer and for a partnership or sole proprietorship is a general partner or the proprietor, respectively. All reports or other information submitted to the Secretary shall be signed and certified by a responsible official or a duly authorized representative. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Secretary; and
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters.

The responsible official shall notify the Secretary if an authorization is no longer accurate. The new duly authorized representative must be designated prior to or together with any reports or information to be signed by a duly authorized representative.

**5.3 Certification statement.** In accordance with ARSD 74:36:05:16.01(14)(a), all documents required by this permit, including application forms, reports, and compliance certification, must be certified by a responsible official or a duly authorized representative. The certification shall include the following statement:

“I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document and all attachments are true, accurate, and complete.”

**5.4 Monitoring log.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain a monitoring log. The monitoring log shall contain the following information:

1. Maintenance schedule for each piece of control equipment listed in Table 1-1. At a minimum, the maintenance schedule shall meet the manufacturer’s recommended schedule for maintenance;
2. The following information shall be recorded for maintenance performed in accordance with the maintenance schedule:
  - a. Identify the unit;
  - b. The date and time maintenance was performed;
  - c. Description of the type of maintenance;
  - d. Reason for performing maintenance; and
  - e. Signature of person performing maintenance;
3. The following information shall be recorded for each visible emission reading required in permit condition 8.1:
  - a. Identify the unit;
  - b. The date and time the visible emission reading was performed;
  - c. If visible emissions were observed;

- d. Description of maintenance performed to eliminate visible emissions;
  - e. Visible emission evaluation if visible emissions are not eliminated; and
  - f. Signature of person performing visible emission reading and/or visible emission evaluation;
4. The owner or operator shall maintain relevant records of the occurrence and duration of each startup, shutdown, or malfunction of process equipment and/or air pollution control equipment;
  5. The following information shall be recorded within two days of each emergency exceedance:
    - a. The date of the emergency exceedance and the date the emergency exceedance was reported to the Secretary;
    - b. The cause(s) of the emergency;
    - c. The reasonable steps taken to minimize the emissions during the emergency; and
    - d. A statement that the permitted equipment was being properly operated at the time of the emergency exceedance;
  6. A record of the carbon monoxide concentration and the electrical load for each time chipped wood treated with copper arsenate and pentachlorophenol is burned in Unit #1;
  7. A record of the pressure drop readings for the units specified in permit condition 8.6; and
  8. A daily record on the continuous emission monitoring data specified in permit condition 8.4.

**5.5 Monthly records.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate and record the following each month:

1. Following the initial startup of Unit #13, the amount of sulfur dioxide emitted into the ambient air from Unit #1 and #13 for the month, in tons, and during the 12-month rolling period ending that month, in tons, and supporting documentation;
2. Following the initial startup of Unit #13, the amount of nitrogen oxide emitted into the ambient air from Unit #1 and #13, in tons, and during the 12-month rolling period ending that month, in tons, and supporting documentation;
3. Following the initial startup of Unit #13, the amount of plantwide mercury, in tons, emitted into the ambient air during the month and during the 12-month rolling period ending that month and supporting documentation;
4. Following the initial startup of Unit #13, the amount of hazardous air pollutants (hydrogen fluoride, hydrogen chloride, and the total hazardous air pollutants), in tons, emitted into the ambient air from Unit #13 during the month and during the 12-month rolling period ending that month and supporting documentation;
5. Following the initial startup of Unit #13, the number of hours Unit #2, #3, #4, #14, #15, #25, and #33 operated, in hours, during the month and during the 12-month rolling period ending that month and supporting documentation;
6. The total amount of refuse derived fuel burned in Unit #1 per month, in pounds or tons;
7. The total amount of subbituminous coal and alternative fuels and waste, except refuse derived fuel, burned in Unit #1 per month, in pounds or tons;



8. The amount of particulate matter 10 microns in diameter or less emitted into the ambient air from Unit #12 during the month and during the 12-month rolling period ending that month; and
9. The amount of plastic chips, granulated insulation, gasket and “O” rings, manufactured wood waste containing formaldehyde resins and materials, tube forms, rubber belting, and petroleum coke burned in Unit #1 per month, in tons, during the month and during the 12-month rolling period ending that month.

**5.6 Annual records.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate and record the following amounts from January 1 to December 31 of each year:

1. The amount and type of fuel burned or material processed through each permitted unit;
2. The number of hours each permitted unit operated; and
3. The amount of total suspended particulate matter, particulate matter 10 microns in diameter or less, sulfur dioxide, nitrogen oxide, volatile organic compounds, carbon monoxide, hazardous air pollutants, and mercury emissions from each permitted unit.

**5.7 Initial startup notification.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the initial startup date of Unit #13. The notification shall be postmarked within 15 days after the date of initial startup. For the purpose of this condition, commencing operation means the initial startup of the boiler, which is the first date that the boiler was operated when firing pulverized coal.

**5.8 Initial commercial startup notification.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the date of commercial operation of Unit #13. The notification shall be postmarked within 15 days after the date of commercial operation. For the purpose of this condition, commence commercial operation means to have begun to generate electricity for sale, including the sale of test generation.

**5.9 Quarterly reports.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a quarterly report. The report shall contain the following information:

1. Name of the facility, permit number, reference to this permit condition, and identify the submittal as a quarterly report;
2. Calendar dates covered in the quarterly report;
3. Following the initial startup of Unit #13, the quantity of sulfur dioxide emissions from Unit #1 and #13, in tons per month; the 12-month rolling total, in tons, for each month in the reporting period, if the owner or operator is in compliance with the sulfur dioxide emission limits in permit condition 9.2; and supporting documentation;
4. Following the initial startup of Unit #13, the quantity of nitrogen oxide emissions from Unit #1 and #13, in tons per month; the 12-month rolling total, in tons, for each month in the reporting period, if the owner or operator is in compliance with the nitrogen oxide emission limits in permit condition 9.5; and supporting documentation;

5. The quantity of particulate matter 10 microns in diameter or less emitted from Unit #12, in tons, for each month and the 12-month rolling total for each month in the reporting period and supporting documentation;
6. Following the initial startup of Unit #13, the quantity of plantwide mercury emitted, in tons, for each month and the 12-month rolling total for each month in the reporting period and supporting documentation;
7. Following the initial startup of Unit #13, the quantity of hazardous air pollutants (hydrogen fluoride, hydrogen chloride, and the total hazardous air pollutants) emitted from Unit #13, in tons, for each month and the 12-month rolling total for each month in the reporting period and supporting documentation;
8. The quantity of plastic chips, granulated insulation, gasket and “O” rings, manufactured wood waste containing formaldehyde resins and materials, tube forms, rubber belting, and petroleum coke burned in Unit #1, in tons, for each month and the 12-month rolling period for each month in the reporting period and supporting documentation;
9. A summary of the excess emissions as determined by the continuous emission monitoring systems:
  - a. The magnitude of opacity for all six minute block averages where the average opacity was greater than or equal to 20 percent;
  - b. The date and duration of the excess emissions;
  - c. The causes of the excess emissions (startup/shutdown, control equipment problems, process problems, other known causes, or unknown causes); and
  - d. The percentage of time the excess emissions occurred during operation of the permitted unit;
10. The amount of time a continuous emission monitoring system was down due to monitoring equipment malfunction, non-monitoring malfunction, quality assurance calibrations, other known causes, or unknown causes;
11. The percentage of time a monitoring system was down while the permitted unit was in operation;
12. The percentage of refuse derived fuel, by weight, burned in Unit #1 during the calendar quarter; and
13. A summary of the time period that the pressure drop for those units specified in permit condition 8.6 was not within the range noted.

The first quarterly report shall be submitted at the end of the calendar quarter that this permit is issued. All other quarterly reports shall be postmarked no later than the 30th day following the end of each calendar quarter (i.e. January 30<sup>th</sup>, April 30<sup>th</sup>, July 30<sup>th</sup>, and October 30<sup>th</sup>).

**5.10 Annual compliance certification.** In accordance with ARSD 74:36:05:16.01(14), the owner or operator shall submit an annual compliance certification letter to the Secretary by March 1 of each year this permit is in effect (NOTE: The Secretary will forward a copy of the certification letter to EPA). The certification shall contain the following information:

1. Methods used to determine compliance including: monitoring, record keeping, performance testing, and reporting requirements;
2. The source is in compliance and will continue to demonstrate compliance with all applicable requirements;
3. In the event the source is in noncompliance, a compliance plan that indicates how the source has or will be brought into compliance;
4. A statement that the owner or operator held sulfur dioxide allowances in the facility account for Unit #1 that equaled or exceeded the actual sulfur dioxide emissions for the reporting period; and
5. Certification statement required in permit condition 5.3.

**5.11 Reporting permit violations.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall report all permit violations. A permit violation should be reported as soon as possible, but no later than the first business day following the day the violation was discovered. The permit violation may be reported by telephone to the South Dakota Department of Environment and Natural Resources at (605) 773-3151 or by FAX at (605) 773-5286.

A written report shall be submitted within five days of discovering the permit violation. Upon prior approval from the Secretary, the submittal deadline for the written report may be extended up to 30 days. The written report shall contain:

1. Description of the permit violation and its cause(s);
2. Duration of the permit violation, including exact dates and times; and
3. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the permit violation.

**5.12 Operational records.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall maintain records on the length of time Unit #2, #3, #4, #7, #14, #15, #25, #30 and #33 operated during each day and calendar month. A 12-month rolling total for Unit #2, #3, #4, #7, #14, #15, #25, #30 and #33 shall be calculated for each calendar month.

## **6.0 CONTROL OF REGULATED AIR POLLUTANTS**

**6.1 Visibility limit.** In accordance with ARSD 74:36:12:01, the owner or operator may not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from any permitted unit, operation, or process listed in Table 1-1. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement.

**6.2 Visibility exceedances.** In accordance with ARSD 74:36:12:02, an exceedance of the operating limit in permit condition 6.1 is not considered a violation during brief periods of soot blowing, start-up, shutdown, or malfunction. Malfunction means any sudden and unavoidable

failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. A failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator of the source is not a malfunction and is considered a violation.

**6.3 Total suspended particulate matter limits.** In accordance with ARSD 74:36:06:02(1) and ARSD 74:36:06:03(1), the owner or operator shall not allow the emission of total suspended particulate matter in excess of the emission limit specified in Table 6-1 for the appropriate permitted unit, operation, and process. Compliance with the particulate matter emission limit is based on stack testing in accordance with ARSD 74:36:06:06.

**Table 6-1 – Total Suspended Particulate Matter Emission Limit**

Unit	Description	Emission Limit
#1	Coal fired cyclone boiler	0.3 pounds per million Btus heat input
#2	Auxiliary boiler	0.4 pounds per million Btus heat input
#3	Heating boiler	0.4 pounds per million Btus heat input
#4	Generator	0.6 pounds per million Btus heat input
#5 <sup>1</sup>	Live fuel storage building	93 pounds per hour
#6 <sup>1</sup>	Rotary car dumper conveyor	93 pounds per hour
#7 <sup>1</sup>	Rotary car dumper building	93 pounds per hour
#8	Fuel transfer house	79 pounds per hour
#9	North Fuel conveying system	70 pounds per hour
#10	South fuel conveying system	70 pounds per hour
#11	Fly ash storage silo	29 pounds per hour
#12	Lime storage silo	25 pounds per hour

<sup>1</sup> – The total suspended particulate matter emission limit is no longer applicable on or after the initial startup of Unit #13.

**6.4 Sulfur dioxide limits.** In accordance with ARSD 74:36:06:02(2), the owner or operator shall not allow the emission of sulfur dioxide in excess of the emission limit specified in Table 6-2 for the appropriate permitted unit, operation, and process.

**Table 6-2 – Sulfur Dioxide Emission Limit**

Unit	Description	Emission Limit
#1	Coal fired cyclone boiler	3.0 pounds per million Btus heat input
#2 <sup>1</sup>	Auxiliary boiler	3.0 pounds per million Btus heat input
#3 <sup>1</sup>	Heating boiler	3.0 pounds per million Btus heat input
#4 <sup>1</sup>	Generator	3.0 pounds per million Btus heat input

<sup>1</sup> – The sulfur dioxide emission limit is no longer applicable on or after the initial startup of Unit #13.

Compliance with the sulfur dioxide emission limit is based on a three-hour rolling average, which is the arithmetic average of three contiguous one-hour periods.

**6.5 PM10 emission limits.** In accordance with ARSD 74:36:05:16.01(8), on or after the initial startup of Unit #13, the owner or operator shall not allow the emissions of particulate matter 10 microns in diameter or less (PM10) in excess of the emission limits specified in Table 6-3 for the appropriate permitted unit, operation, and process, except Unit #12. The PM10 emission limit in Table 6-3 for Unit #12 is applicable on and after the date the permit is issued.

**Table 6-3 – PM10 Emission Limits**

<b>Unit</b>	<b>Description</b>	<b>PM10 Emission Limit <sup>1</sup></b>
#1	Coal fired cyclone boiler	0.26 pounds per million Btus (filterable)
#2	Auxiliary boiler	0.01 pounds per million Btus (filterable)
#3	Heating boiler	0.01 pounds per million Btus (filterable)
#4	Generator	0.32 grams per horsepower-hour (filterable); and 0.9 pounds per hour (filterable)
#7a	Rotary car dumper building	0.01 grains per standard cubic foot (filterable); and 3.2 pounds per hour (filterable)
#7b		0.01 grains per standard cubic foot (filterable); and 3.2 pounds per hour (filterable)
#7c		0.01 grains per standard cubic foot (filterable); and 3.2 pounds per hour (filterable)
#7d		0.01 grains per standard cubic foot (filterable); and 3.2 pounds per hour (filterable)
#8	Fuel transfer house	0.02 grains per standard cubic foot (filterable); and 3.2 pounds per hour
#9	North Fuel conveying system	0.01 grains per standard cubic foot (filterable); and 1.2 pounds per hour
#10	South fuel conveying system	0.01 grains per standard cubic foot (filterable); and 1.4 pounds per hour
#11	Fly ash storage silo	0.01 grains per standard cubic foot (filterable); and 0.4 pounds per hour
#12	Lime storage silo	0.01 grains per standard cubic foot (filterable); and 0.1 pounds per hour

<sup>1</sup> – Compliance with the emission limit is based on the average of three test runs based on the performance test procedures and requirements in Chapter 7.0.

**6.6 Approved alternative fuels and wastes for Unit #1.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator may use the following alternative fuels and non hazardous wastes as a fuel for Unit #1:

1. Lignite coal;

2. Agricultural crop residue and waste seeds;
3. Distillate oil;
4. Tire derived fuel;
5. Refuse derived fuel;
6. Waste toner powder;
7. Trees and natural wood;
8. Used oil and solvents (on-site generated);
9. Plastic chips;
10. Granulated insulation;
11. Gasket and “O” rings;
12. Manufactured wood waste containing formaldehyde resins and materials;
13. Tube forms;
14. Rubber belting;
15. Petroleum coke;
16. Oil filters (on-site generated);
17. Chipped wood treated with copper arsenate and pentachlorophenol;
18. Boiler steam side cleaning waste;
19. Floor dry, diatomaceous earth, dirt, sorbent debris containing non PCB oil; and
20. Evaporative brine concentrator supernatant at a maximum feed rate of 130 gallons per minute.

This permit condition does not limit the owner or operator from requesting and being approved to burn other alternative fuels or wastes that are not listed above. The owner or operator shall submit an application and receive written approval prior to any additional alternative fuels or wastes being used to fire Unit #1.

**6.7 Limitations on approved alternative fuels and wastes for Unit #1.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator may burn only the following amounts for the specified alternative fuel or non hazardous waste in Unit #1 during a 12-month rolling period:

1. 15 tons of plastic chips;
2. 600 tons of granulated insulation;
3. 1,800 tons of gasket and “O” rings;
4. 792 tons of manufactured wood waste containing formaldehyde resins and materials;
5. 30 tons of tube forms;
6. 480 tons of rubber belting; and
7. 70,000 tons of petroleum coke.

The owner or operator shall submit an application and receive written approval prior to using one of the above alternative fuels or wastes in an amount greater than specified in this permit condition.

**6.8 Unit #1 operating requirements for certain alternative fuels and wastes.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall burn chipped wood treated with copper arsenate and pentachlorophenol under the following conditions:

1. The carbon monoxide concentration in Unit #1's stack shall be less than or equal to 100 parts per million; and
2. The electrical load generated by Unit #1 is greater than 215 megawatts.

**6.9 Co-fired combustor qualification.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the amount of fuel and/or waste burned in Unit #1 to 30 percent or less by weight of municipal solid waste as measured on a calendar quarter basis. By limiting the amount of fuel and/or waste burned, Unit #1 is considered a co-fired combustor as defined in ARSD 74:36:07:07, as referenced to 40 CFR § 60.51a. Refuse derived fuel is the only alternative fuel and/or waste approved for use as a fuel in Unit #1 that is considered a municipal solid waste.

**6.10 New source performance standard for coal preparation plants.** In accordance with ARSD 74:36:07:16, as referenced to 40 CFR §§ 60.250 through 60.254, the owner or operator shall comply with the particulate standards, monitoring, and testing requirements applicable to Unit #7 on and after the initial startup of Unit #13.

**6.11 New source performance standard for stationary compression ignition internal combustion engines.** In accordance with 40 CFR §§ 60.4200 through 60.4219, the owner or operator shall comply with all applicable standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements applicable to Unit #14, #15, #25 and #33.

**6.12 Air emission exceedances – emergency conditions.** In accordance with ARSD 74:36:05:16.01(18), the Secretary will allow for an unavoidable emission exceedance of a technology-based emission limit if the exceedance is caused by an emergency condition and immediate action is taken by the owner or operator to restore the operations back to normal. An emergency condition is a situation arising from a sudden and reasonably unforeseeable event beyond the control of the source, including acts of God. An emergency shall not include an emission exceedance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. The owner or operator shall notify the Secretary within two working days of the incident and take all steps possible to eliminate the excess emissions. The notification must provide a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. If the notification is submitted orally, a written report summarizing the information required by the notification shall be submitted and postmarked within 30 days of the oral notification.

**6.13 Circumvention not allowed.** In accordance with ARSD 74:36:05:47.01, the owner or operator may not install, use a device, or use a means that conceals or dilutes an air emission that would otherwise violate this permit. This includes operating a unit or control device that emits air pollutants from an opening other than the designed stack, vent, or equivalent opening.

**6.14 Minimizing emissions.** In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.11(d), the owner or operator shall at all times, when practicable, maintain and operate all permitted units in a manner that minimizes air pollution emissions.

## **7.0 PERFORMANCE TESTS**

**7.1 Performance test may be required.** In accordance with ARSD 74:36:11:02, the Secretary may request a performance test. A performance test shall be conducted while operating the unit at or greater than 90 percent of its maximum design capacity, unless otherwise specified by the Secretary. A performance test conducted while operating less the unit less than 90 percent of its maximum design capacity will result in the operation being limited to the percent achieved during the performance test. The Secretary has the discretion to extend the deadline for completion of the performance test required by the Secretary, if circumstances reasonably warrant but will not extend the deadline past a federally required performance test deadline.

**7.2 Test methods and procedures.** The owner or operator shall conduct the performance test in accordance with 40 CFR Part 60, Appendix A; 40 CFR Part 63, Appendix A; and 40 CFR Part 51, Appendix M. The Secretary may approve an alternative method if a performance test specified in 40 CFR Part 60, Appendix A; 40 CFR Part 63, Appendix A; and 40 CFR Part 51, Appendix M is not federally applicable or federally required.

**7.3 Representative performance test.** In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(c), performance tests shall be conducted under such conditions as the Secretary shall specify to the owner or operator based on the representative performance of the unit being tested. The owner or operator shall make available to the Secretary such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in this permit.

**7.4 Submittal of test plan.** In accordance with ARSD 74:36:11:01, the owner or operator shall submit the proposed testing procedures to the Secretary at least 30 days prior to any performance test. The Secretary will notify the owner or operator if the proposed test procedures are approved or denied. If the proposed test procedures are denied, the Secretary will provide written notification that outlines what needs to be completed for approval.



**7.5 Notification of test.** In accordance with ARSD 74:36:11:03, the owner or operator shall notify the Secretary at least 10 days prior to the start of a performance test to arrange for an agreeable test date when the Secretary may observe the test. The Secretary may extend the deadline for the performance test in order to accommodate schedules in arranging an agreeable test date.

**7.6 Performance test report.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a performance test report to the Secretary within 60 days after completing the performance test or by a date designated by the Secretary. The performance test report shall contain the following information:

1. A brief description of the process and the air pollution control system being tested;
2. Sampling location description(s);
3. A description of sampling and analytical procedures and any modifications to standard procedures;
4. Test results;
5. Quality assurance procedures and results;
6. Records of operating conditions during the test, preparation of standards, and calibration procedures;
7. Raw data sheets for field sampling and field and laboratory analyses;
8. Documentation of calculations;
9. All data recorded and used to establish parameters for compliance monitoring; and
10. Any other information required by the test method.

**7.7 Initial performance test for PM10.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test within 180 days after initial startup of Unit #13 to determine the emission rate of particulate matter 10 microns in diameter or less (filterable) on the following units:

1. Unit #2, #3, and #4;
2. Unit #7a, #7b, #7c, or #7d;
3. Unit #8, #11 or #12; and
4. Unit #9 or #10.

**7.8 Initial performance test for nitrogen oxide.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on Unit #2, #3, #4, #14, #15, #25 and #33. The initial performance tests shall be conducted within 180 days after initial startup of Unit #13 to determine the nitrogen oxide emission rate for each unit.

**7.9 Initial sulfur content of liquid fuel for Unit #2, #3 and #4.** In accordance with ARSD 74:36:11:02, prior to firing distillate oil or biodiesel in Unit #2, #3 and #4 on or after the initial startup of Unit #13, the owner or operator shall obtain a grab sample from the storage tank(s)

that supply distillate oil and biodiesel to Unit #2, #3 and #4. The grab sample shall be analyzed to determine the sulfur content of the distillate oil and biodiesel.

**7.10 Initial sulfur content test of liquid fuel for Unit #14 #15, #25 and #33.** In accordance with ARSD 74:36:11:02, prior to firing distillate oil or biodiesel in Unit #14 #15, #25 and #33, the owner or operator shall obtain an initial fuel supplier certification for the first load of distillate oil and biodiesel purchased or received. The fuel supplier certification shall include the following information:

1. The name of the oil supplier;
2. A statement from the oil supplier that the distillate oil complies with the specifications under the definition of distillate oil. Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2. Specifications for fuel oils are defined in the American Society for Testing and Materials in ASTM D396-78, "Standards Specifications for Fuel Oils"; and
3. A statement that the sulfur content of the distillate oil and/or biodiesel does not exceed 0.0015 weight percent sulfur.

In the case where a fuel supplier certification is not obtained, the owner or operator shall collect a grab sample from the distillate oil and/or biodiesel storage tank. The grab sample shall be analyzed to determine the sulfur content of the distillate oil and/or biodiesel in the storage tank prior to burning the distillate oil and/or biodiesel in Unit #14, #15, #25 and #33.

**7.11 Periodic performance test for Unit #1.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct periodic performance tests on Unit #1 to determine the emission rate of particulate matter 10 microns in diameter or less (filterable). The initial performance test on Unit #1 shall be conducted within 180 days of permit issuance. A second test shall be completed within 540 to 720 days after the initial test was completed.

**7.12 Periodic performance test for hazardous air pollutants.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on Unit #13. The initial performance test shall be conducted within 180 days after initial startup of Unit #13. The owner or operator shall conduct an annual performance test during each calendar year starting with the calendar year after the initial performance test was completed. Each subsequent performance test shall not be conducted within 180 days after the previous performance test. The performance tests shall determine the hydrogen fluoride and hydrogen chloride emission rates in pounds per hour from Unit #13 using 40 CFR Part 60, Appendix A, Method 26A, and the hydrogen fluoride and hydrogen chloride control efficiencies across the control devices. The performance test shall be conducted while Unit #13 is in operation by itself and when Unit #1 and Unit #13 are both in operation. The control efficiency will be based on a coal analysis of the coal being burned in Unit #13 during the performance test to determine the amount of fluorides and chlorides and a stack test conducted on the exhaust stack for Unit #13. The control efficiency shall be based on Equations 7-1, 7-2, and 7-3;

Equation 7-1

$$HCE = \frac{(H) - (HT)}{H}$$

Where:

- H = Potential hydrogen fluoride or hydrogen chloride emissions from Unit #13, in pounds per hour, emitted during the performance test as calculated by Equation 7-2 or 7-3;
- HCE = The calculated control efficiency its decimal form (e.g. 95% equates to 0.95); and
- HT = Hydrogen fluoride or hydrogen chloride emissions from Unit #13 as determined by the performance test in pounds per hour.

Equation 7-2

$$HF = \frac{(F) \times (CU) \times (1.053)}{(1,000,000)}$$

Where:

- HF = Potential hydrogen fluoride emissions from Unit #13, in pounds per hour, during a performance test run;
- F = Average fluoride content of the coal, in parts per million by weight on a wet basis, for the performance test run;
- CU = Amount of coal burned during the performance test run, in tons on a wet basis;
- 1.053 = Conversion factor to convert fluoride to hydrogen fluoride; and
- 1,000,000 = Conversion factor to convert parts per million to a decimal form.

Equation 7-3

$$HCl = \frac{(Cl) \times (CU) \times (1.028)}{(1,000,000)}$$

Where:

- HCl = Hydrogen chloride emissions from Unit #13, in pounds per hour, during a performance test run;
- Cl = Average chloride content of the coal, in parts per million by weight on a wet basis, for the performance test run;
- CU = Amount of coal burned during the performance test run, in tons on a wet basis;
- 1.028 = Conversion factor to convert chloride to hydrogen chloride; and
- 1,000,000 = Conversion factor to convert parts per million to a decimal form.

If the results on an annual performance test demonstrate a hydrogen chloride emission rate greater than 1.83 pounds per hour, the owner or operator shall conduct a performance test once per calendar quarter. Each subsequent quarterly performance test shall not be conducted within 45 days after the previous performance test. If the results of two successive quarterly tests demonstrate a hydrogen chloride emission rate less than 1.83 pounds per hour, the owner or operator may revert back to conducting an annual performance test.

If the results on an annual performance test demonstrate a hydrogen fluoride emission rate greater than 1.83 pounds per hour, the owner or operator shall conduct a performance test once per calendar quarter. Each subsequent quarterly performance test shall not be conducted within 45 days after the previous performance test. If the results of two successive quarterly tests demonstrate a hydrogen fluoride emission rate less than 1.83 pounds per hour, the owner or operator may revert back to conducting an annual performance test.

## **8.0 MONITORING**

**8.1 Periodic monitoring for opacity limits.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall demonstrate compliance with the opacity limits in Chapter 6.0, except for Unit #1, #6 through #12, inclusive, and #13, on a periodic basis. Periodic monitoring shall be based on the amount of visible emissions from each unit and evaluated according to the following steps:

**Step 1:** If there are no visible emissions from a unit subject to an opacity limit, periodic monitoring shall consist of a visible emission reading. A visible emission reading shall consist of a visual survey of each unit over a two-minute period to identify if there are visible emissions. The visible emission reading must be conducted while the unit is in operation; but not during periods of startup, shutdown, or malfunction. Visible emission readings on each unit subject to an opacity limit in Chapter 6.0 shall be based on the following frequency:

- a. The owner or operator shall conduct a visible emission reading once per calendar month;
- b. If no visible emissions are observed from a unit in six consecutive monthly visible emission readings, the owner or operator may decrease the frequency of readings from monthly to semiannually for that unit; or
- c. If no visible emissions are observed from a unit in two consecutive semiannual visible emission readings, the owner or operator may decrease the frequency of testing of readings from semiannually to annually for that unit.

**Step 2:** If visible emissions are observed from a unit at any time other than periods of startup, shutdown, or malfunction, the owner or operator shall conduct a visible emission test on that unit to determine if the unit is in compliance with the opacity limit specified in Chapter 6.0. The emission test shall be for six minutes and conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The visible emission test must be conducted while the unit is in operation; but not during periods of startup, shutdown, or malfunction. Visible emission tests shall be based on the following frequency:

- a. The visible emission test must be conducted within one hour of witnessing a visible emission from a unit during a visible emission reading;
- b. If the visible emission test required in Step 2(a) results in an opacity value less than or equal to 50 percent of the opacity limit for the unit, the owner or operator shall perform a visible emission test once per month;

- c. If the opacity value of a visible emission test is less than five percent for six straight monthly tests, the owner or operator may revert back to monthly visible emission readings as required in Step 1;
- d. If the visible emission test required in Steps 2(a) or 2(b) results in an opacity value greater than 50 percent of the opacity limit but less than the opacity limit, the owner or operator shall perform a visible emission test once per week; or
- e. If the visible emission test in Step 2(d) results in an opacity value less than or equal to 50 percent of the opacity limit for six straight weekly readings, the owner or operator may revert back to a monthly visible emission test as required in Step 2(b).

The person conducting the visible emission test under permit condition 8.1 Step 2 must be certified in accordance with 40 CFR Part 60, Appendix A, Method 9. If a visible emission test is required before a person is certified in accordance with permit condition 8.2, the owner or operator shall notify the Secretary within 24 hours of observing the visible emissions to schedule a visible emission test performed by a state inspector.

**8.2 Certified personnel – visible emission tests.** In accordance with ARSD 74:36:13:07, within 180 days after permit issuance the owner or operator shall retain a person that is certified to perform a visible emission test in accordance with 40 CFR Part 60, Appendix A, Method 9. The owner or operator shall retain a certified person throughout the remaining term of this permit.

**8.3 Monitoring sulfur content of distillate oil.** In accordance with ARSD 74:36:05:16.01(9), on or after the initial startup of Unit #13, the owner or operator shall obtain a fuel supplier certification for each load of distillate oil and/or biodiesel purchased or received that will be burned in Unit #2, #3, #4, #14, #15, #25 and/or #33. The fuel supplier certification shall include the following information:

1. The name of the oil supplier;
2. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil. Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2. Specifications for fuel oils are defined in the American Society for Testing and Materials in ASTM D396-78, "Standards Specifications for Fuel Oils";
3. A statement that the sulfur content of the distillate oil and/or biodiesel does not exceed 0.05 weight percent sulfur for distillate oil or biodiesel that will be burned in Unit #2, #3, and #4; and
4. A statement that the sulfur content of the distillate oil and/or biodiesel does not exceed 0.0015 weight percent sulfur for distillate oil or biodiesel that will be burned in Unit #14, #15, #25 and #33.

In the case where a fuel supplier certification is not obtained, the owner or operator shall collect a grab sample from the distillate oil and/or biodiesel storage tank within 30 days of receiving the shipment of distillate oil and/or biodiesel but before another load of distillate oil and/or biodiesel

is transferred into the storage tank. The grab sample shall be analyzed to determine the sulfur content of the distillate oil and/or biodiesel in the storage tank.

**8.4 Continuous emission monitoring systems.** In accordance with ARSD 74:36:05:16.01(9), 74:36:16:04 as referenced to 40 CFR § 75, 74:36:07:03 as referenced to § 60.49Da, and 74:36:19:15, the owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems on the exhaust stack for Unit #1 for opacity, carbon dioxide, sulfur dioxide (CEM1), nitrogen oxide (CEM5), and flue gas flow, on Unit #1 upstream of the wet flue gas desulfurization control device for opacity, carbon dioxide, sulfur dioxide (CEM2), nitrogen oxide (CEM6), and flue gas flow, on Unit #13 upstream of the wet flue gas desulfurization control device for opacity, carbon dioxide, sulfur dioxide (CEM3), nitrogen oxide (CEM7), carbon monoxide, and flue gas flow, and on the exhaust stack after the wet flue gas desulfurization control device for sulfur dioxide (CEM4), and flue gas flow. The continuous monitoring systems for Unit #1 upstream of the wet flue gas desulfurization control device are required to be installed and operational prior to the initial startup of Unit #13. The continuous monitoring systems for Unit #13 are required to be installed and operational prior to or upon initial startup of Unit #13. The Unit #1 continuous monitoring systems upstream of the wet flue gas desulfurization control device must be certified by the earlier of 90 unit operation days or 180 calendar days after the Unit #1's emissions are routed through the new stack. The Unit #13 continuous monitoring systems must be certified by the earlier of 90 unit operation days or 180 calendar days after the unit commences commercial operation. The continuous emission monitoring systems shall measure and record the emissions at all times, including periods of startup, shutdown, malfunction or emergency conditions. Monitor downtime is allowed for system breakdowns, repairs, calibration checks, zero and span adjustments, and when Unit #1 and #13 are not in operation.

Sulfur dioxide and nitrogen oxide emissions during continuous emission monitor downtime when Unit #1 and/or #13 are operational shall be determined in accordance with ARSD 74:36:16, as referenced to 40 CFR Part 75, Subpart D and E.

**8.5 Performance specifications and quality assurance.** In accordance with ARSD 74:36:07:03 and ARSD 74:36:13, the continuous emission monitoring systems on Unit #1 and #13 shall meet the performance specifications in 40 CFR Part 60, Appendix B and the quality assurance requirements in 40 CFR Part 60, Appendix F or the performance specifications in 40 CFR Part 75, Appendix A and the quality assurance requirements in 40 CFR Part 75, Appendix B.

**8.6 Compliance assurance monitoring.** In accordance with ARSD 74:36:13:08, as referenced to 40 CFR §§ 64.1 through 64.10, the owner or operator shall install, calibrate, maintain, and operate a device to monitor the pressure drop of the baghouse associated with Unit #6 through #12. If the pressure drop is less than the low range or higher than the high range noted in Table 8-1, the owner or operator shall conduct a visible emission reading in accordance with permit condition 8.1. If visible emissions are detected and the owner or operator is unable

to eliminate the visible emissions in accordance with permit condition 8.1, the owner or operator shall conduct a performance test to verify compliance with the particulate limits noted in Chapter 6.0 within 90 days of the occurrence.

**Table 8-1 - Pressure Drop Ranges**

Unit	Description	Pressure Drop	
		Low Range	High Range
#6 <sup>1</sup>	Rotary car dumper conveyor	1 inch of water	19 inches of water
#7	Rotary car dumper building	1 inch of water	19 inches of water
#8	Fuel transfer house	1 inch of water	8 inches of water
#9	North fuel conveying system	½ inch of water	10 inches of water
#10	South fuel conveying system	½ inch of water	10 inches of water
#11	Fly ash storage silo	½ inch of water	10 inches of water
#12 <sup>2</sup>	Lime storage silo	½ inch of water	5 inches of water

<sup>1</sup> – The owner or operator is not required to measure the pressure drop on Unit #6 on or after the initial startup of Unit #13; and

<sup>2</sup> – The owner or operator is required to measure the pressure drop on Unit #12 and meet the requirements of this permit condition for Unit #12 on and after permit issuance.

## 9.0 PSD EXEMPTION

**9.1 PM10 emission limit – Unit #12.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not emit into the ambient air equal to or greater than 14.3 tons of particulate matter 10 microns in diameter or less (PM10) per 12-month rolling period from Unit #12. The short term and long term limits allow Unit #12 to forgo a Prevention of Significant Deterioration review for PM10. Any relaxation in this permit condition that increases PM10 emissions equal to or greater than 14.3 tons per year may require a full Prevention of Significant Deterioration review as though construction had not commenced on Unit #12.

**9.2 Sulfur dioxide limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not emit into the ambient air sulfur dioxide emissions in excess of the 12-month rolling emission limit specified in Table 9-1, regardless of the sulfur dioxide allowances provided in permit condition 10.1. The 12-month rolling emission limits include periods of startup, shutdown, and malfunction. The first month of the 12-month rolling total shall begin the month of the initial startup of Unit #13.

**Table 9-1 – Sulfur Dioxide Emission Limits**

Description	Emission Limit
Unit #1	11,005 tons per 12-month rolling period
Unit #13	2,268 tons per 12-month rolling period

Any relaxation in the permit that increases applicable emissions greater than 11,005 tons of sulfur dioxide per 12-month rolling period for Unit #1 or 2,268 tons of sulfur dioxide per 12-month rolling period for Unit #13 or a violation of the sulfur dioxide limit(s) in Table 9-1 shall require a full Prevention of Significant Deterioration review for sulfur dioxide as though construction had not commenced on those sources.

The sulfur dioxide emissions from Unit #1 and #13 shall be based on the continuous emission monitoring system associated with each unit.

**9.3 Sulfur dioxide monthly emission calculations.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall calculate sulfur dioxide emissions from Unit #1 and #13 each month as identified in Equations 9-1a and 9-1b, respectively.

*Equation 9-1a – Unit #1*

$$Unit\ #1_{SO_2} = (CEM1) + \left( (CEM4) \times \left( \frac{(CEM2)}{(CEM2) + (CEM3)} \right) \right)$$

Where:

- Unit #1<sub>SO2</sub> = Sulfur dioxide emissions, in tons per month, from Unit #1;
- CEM1 = Sulfur dioxide emissions, in tons per month, from Unit #1 emitted from the stack associated with Unit #1 and measured by a continuous emission monitoring system specified in permit condition 8.4;
- CEM2 = Sulfur dioxide emissions, in tons per month, from Unit #1 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device;
- CEM3 = Sulfur dioxide emissions, in tons per month, from Unit #13 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device; and
- CEM4 = Sulfur dioxide emissions, in tons per month, from Unit #1 and #13 that are emitted from the stack associated with Unit #13, measured by a continuous emission monitoring system specified in permit condition 8.4, and located downstream of the wet flue gas desulfurization control device.

*Equation 9-1b – Unit #13*

$$Unit\ #13_{SO_2} = \left( (CEM4) \times \left( \frac{(CEM3)}{(CEM2) + (CEM3)} \right) \right)$$

Where:

- Unit #13<sub>SO2</sub> = Sulfur dioxide emissions, in tons per month, from Unit #13;
- CEM2 = Sulfur dioxide emissions, in tons per month, from Unit #1 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device;



- CEM3 = Sulfur dioxide emissions, in tons per month, from Unit #13 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device; and
- CEM4 = Sulfur dioxide emissions, in tons per month, from Unit #1 and #13 that are emitted from the stack associated with Unit #13, measured by a continuous emission monitoring system specified in permit condition 8.4, and located downstream of the wet flue gas desulfurization control device.

The continuous emission monitoring systems shall calculate the sulfur dioxide emissions in accordance Equation 9-2, which is derived from the Acid Rain Program's Equation F-1 and F-3.

Equation 9-2

$$CEM = \frac{\sum_i^x (K) \times (Ch_i) \times (Qh_i) \times th_i}{2000}$$

Where:

- CEM = Sulfur dioxide emissions, in tons per month, emitted at the location of the specific continuous emission monitoring system;
- i = A specific hour in the month for the calculation to be calculated;
- x = The number of hours the unit actually operated during the month;
- K = 0.0000001660 pounds sulfur dioxide per standard cubic foot per parts per million;
- Ch = Hourly average sulfur dioxide concentration during unit operation, stack moisture basis, parts per million;
- Qh = Hourly average volumetric flow rate during unit operation, stack moisture basis, standard cubic feet per hour; and
- th = Unit operating time, hour or fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator).

**9.4 Sulfur content limit for liquid fuel.** In accordance with ARSD 74:36:05:16.01(8), on and after the initial startup of Unit #13, the owner or operator shall not burn distillate oil with a sulfur content greater than 0.05 percent sulfur by weight in Unit #2, #3 and #4. In addition, the owner or operator shall not burn distillate oil or biodiesel with a sulfur content greater than 0.0015 percent sulfur by weight in Unit #14, #15, #25 and #33.

**9.5 Nitrogen oxide limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not emit into the ambient air nitrogen oxide emissions in excess of the 12-month rolling emission limit specified in Table 9-2. The 12-month rolling emission limits include periods of startup, shutdown, and malfunction. The first month of the 12-month rolling total shall begin the month of initial startup of the Unit #13.

**Table 9-2 – Nitrogen Oxide Emission Limits**

Description	Emission Limit
Unit #1	15,104 tons per 12-month rolling period
Unit #13	1,314 tons per 12-month rolling period

Any relaxation in the permit that increases applicable emissions greater than 15,104 tons of nitrogen oxide per 12-month rolling period for Unit #1 or 1,314 tons of nitrogen oxide per 12-month rolling period for Unit #13 or a violation of the nitrogen oxide limit(s) in Table 9-2 shall require a full prevention of significant deterioration review for nitrogen oxide as though construction had not commenced on those sources.

The nitrogen oxide emissions from Unit #1 and #13 shall be based on the continuous emission monitoring system associated with each unit.

**9.6 Nitrogen oxide monthly emission calculations.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall calculate nitrogen oxide emissions from Unit #1 and #13 each month as identified in Equations 9-3a and 9-3b, respectively.

*Equation 9-3a – Unit #1*

$$Unit\ #1_{NO_x} = (CEM5) + (CEM6)$$

Where:

- Unit #1<sub>NOx</sub> = Nitrogen oxide emissions, in tons per month, from Unit #1;
- CEM5 = Nitrogen oxide emissions, in tons per month, from Unit #1 emitted from the stack associated with Unit #1 and measured by a continuous emission monitoring system specified in permit condition 8.4; and
- CEM6 = Nitrogen oxide emissions, in tons per month, from Unit #1 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device.

*Equation 9-3b – Unit #13*

$$Unit\ #13_{NO_x} = (CEM7)$$

Where:

- Unit #13<sub>NOx</sub> = Nitrogen oxide emissions, in tons per month, from Unit #13; and
- CEM7 = Nitrogen oxide emissions, in tons per month, from Unit #13 that are measured by the continuous emission monitoring system specified in permit condition 8.4 and located upstream of the wet flue gas desulfurization control device.

The continuous emission monitoring systems shall calculate the nitrogen oxide emissions in accordance equation 9-4, which is derived from the Acid Rain Program’s Equations F-6, F-15, and F-18a.

Equation 9-4

$$CEM = \frac{\sum_{i=1}^x \left( \frac{(K) \times (Ch_i) \times (Fc) \times (100)}{CO2w} \right) \times \left( \frac{(Qw_i) \times (CO2w)}{(Fc) \times (100)} \right) \times th_i}{2000}$$

Where:

- CEM = The nitrogen oxide emissions emitted at the location of the specific continuous emission monitoring system;
- i = A specific hour in the month for the calculation to be calculated;
- x = The number of hours the unit actually operated during the month;
- K = 0.0000001194 pounds nitrogen oxide per standard cubic foot - parts per million;
- Ch = Hourly average nitrogen oxide concentration during unit operation, stack moisture basis, parts per million;
- Fc = Carbon based F-factor – 1,840 standard cubic feet per million Btus;
- CO2w = Percent carbon dioxide wet basis;
- Qw = Hourly average volumetric flow rate during unit operation, wet basis, standard cubic feet per hour; and
- th = Unit operating time, hour or fraction of an hour (in equal increments that can range from one hundredth to one quarter of an hour, at the option of the owner or operator).

**9.7 Short term nitrogen oxide emission limits.** In accordance with ARSD

74:36:05:16.01(8), on or after the initial startup of Unit #13, the owner or operator shall not allow the emissions of nitrogen oxide in excess of the emission limit specified in Table 9-1 for the appropriate permitted unit, operation, and process.

**Table 9-1 – Nitrogen Oxide Short Term Emission Limit**

Unit	Description	Nitrogen Oxide Emission Limit <sup>1</sup>
#2	Auxiliary boiler	0.17 pounds per million Btus heat input
#3	Heating boiler	0.14 pounds per million Btus heat input
#4	Generator	0.024 pounds per horsepower hour
#14	Fire pump	New Source Performance Standard – see permit condition 6.11
#15	Generator	New Source Performance Standard – see permit condition 6.11
#25	Booster pump (boiler)	New Source Performance Standard – see permit condition 6.11
#33	Booster pump (coal area)	New Source Performance Standard – see permit condition 6.11

<sup>1</sup> – Compliance with the nitrogen oxide emission limit is based on the average of three test runs.

**9.8 Unit #1 operational limits.** In accordance with ARSD 74:36:05:16.01(8), before the initial startup of Unit #13, the owner or operator shall route the emissions from Unit #1 through the wet flue gas desulfurization system associated with Unit #13 at all times except during periods when the wet flue gas desulfurization system is not in operation due to malfunctions, repairs, preventative maintenance, or to conduct emissions testing to demonstrate compliance

with the emission limits specific to Unit #13. Unit #1 may be operated when the wet flue gas desulfurization system is not in operation due to malfunctions, repairs, preventative maintenance, or to conduct emissions testing to demonstrate compliance with the emission limits specific to Unit #13 provided the owner or operator emits the exhaust gases from Unit #1 through the exhaust stack for Unit #1 and can demonstrate compliance with the sulfur dioxide limit for Unit #1 in permit condition 9.2.

**9.9 Operational limit for Units #2, #3, and #4.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not operate Unit #2, #3, and #4 for more than 500 hours per 12-month rolling period for each unit. The first month of the 12-month rolling total shall begin the month of the initial startup of Unit #13.

**9.10 Operational limit for Units #14, #15, #25 and #33.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall not operate Unit #14, #15, #25 and #33 for more than 500 hours per 12-month rolling period for each unit. The first month of the 12-month rolling total shall begin after a reasonable shakedown period. A reasonable shakedown period shall not exceed 180 days from the initial startup of Unit #13.

## **10.0 ACID RAIN PROGRAM**

**10.1 Acid rain sulfur dioxide requirements for Unit #1.** In accordance with ARSD 74:36:16, the owner or operator shall operate Unit #1 in accordance with the standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements set forth in the phase II Acid Rain permit applications for sulfur dioxide, submitted August 24, 1995 (see Attachment A), except the amount of sulfur dioxide emissions shall not exceed the plantwide limit in permit condition 9.2.

**10.2 Acid rain nitrogen oxide requirements for Unit #1.** In accordance with ARSD 74:36:16, the owner or operator shall operate Unit #1 in accordance with the standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements set forth in the phase II nitrogen oxide compliance plan submitted November 4, 1997 (see Attachment B). In accordance with ARSD 74:36:16:05, as referenced to 40 CFR § 76.7(a)(2), the annual average emission limit for nitrogen oxide is 0.86 pounds per million Btus.

## **11.0 HAZARDOUS AIR POLLUTANT EMISSION LIMITS**

**11.1 Plantwide mercury emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not emit into the ambient air greater than 189 pounds of mercury per 12-month rolling period from Unit #1 and #13. The plantwide limit includes periods of startup, shutdown, and malfunction. The first month of the 12-month rolling total shall begin three years

from the month of commencing commercial operation of Unit #13. The compliance demonstration for the plantwide limit shall be based on the monitoring requirements in permit condition 11.6.

**11.2 Unit #13 mercury emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain mercury in excess of 0.000066 pounds per megawatt-hour gross energy output. Compliance with the mercury emission limit shall be based on a 12-month rolling average using the continuous emission monitoring system. The mercury limit applies at all times except during periods of startup, shutdown, or malfunction.

**11.3 Unit #13 hydrogen fluoride emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain hydrogen fluoride in excess of 2.17 pounds per hour. Compliance with the hydrogen fluoride emission limit is based on the stack testing requirements in Chapter 7.0. Compliance with the hydrogen fluoride emission limit during startup and shutdown is based on startup, shutdown, and malfunction plan in permit condition 14.8.

**11.4 Unit #13 hydrogen chloride emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain hydrogen chloride in excess of 2.17 pounds per hour. Compliance with the hydrogen chloride emission limit is based on the stack testing requirements in Chapter 7.0. Compliance with the hydrogen chloride emission limit during startup and shutdown is based on startup, shutdown, and malfunction plan in permit condition 14.8.

**11.5 Unit wide hazardous air pollutant limit for Unit #13.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not emit greater than or equal to 9.5 tons of a single hazardous air pollutant or 23.8 tons of a combination of hazardous air pollutants from Unit #13 per 12-month rolling period. The 12-month rolling total shall begin on the initial startup of Unit #13. The 12-month rolling total shall be calculated as identified in Equation 11-1.

*Equation 11-1*

$$E = \sum_{i=1}^{12} ME_i$$

Where:

- E = Hazardous air pollutant emissions, in tons per year, over a 12-month period; and
- ME = Hazardous air pollutant emissions, in tons per month, as calculated in permit condition 11.8.

If the owner or operator actually emits more than 8.0 tons per 12-month rolling period of hydrogen chloride emissions, the owner or operator shall install, operate and maintain a continuous emission monitoring system for hydrogen chloride. If the owner or operator actually emits more than 8.0 tons per 12-month rolling period of hydrogen fluoride emissions, the owner or operator shall install, operate and maintain a continuous emission monitoring system for hydrogen fluoride.

The owner or operator shall submit an application to amend the Title V air quality permit to incorporate the continuous emission monitoring system within 180 days after the month that the first 12-month period exceeded 8.0 tons per year.

**11.6 Continuous mercury emission monitoring system.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall install, calibrate, maintain, and operate a continuous mercury emission monitoring system on the common stack for Unit #1 and #13. The owner or operator has the option of installing, calibrating, maintaining, and operating a continuous monitoring system on Unit #1 or parametric monitoring approved by the Secretary for time periods when the exhaust gas from Unit #1 is not passed through the common stack for Unit #1 and #13 as specified in permit condition 9.6. The continuous monitoring system is required to be installed and operational prior to or upon initial startup of Unit #13. The continuous monitoring system for mercury must be certified by the earlier of 90 unit operation days or 180 calendar days after the unit commences commercial operation. The continuous emission monitoring system shall measure and record the emissions at all times, including periods of startup, shutdown, malfunction or emergency conditions. Monitor downtime is allowed for system breakdowns, repairs, calibration checks, zero and span adjustments, and when Unit #13 is not in operation. The owner or operator shall submit the performance specification and quality assurance requirements for the system to the Secretary for approval prior to the initial startup of Unit #13.

**11.7 Unit #13 coal analysis.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall obtain a weekly composite coal sample of the coal to be burned in Unit #13 and determine the fluoride content by weight and chloride content by weight. A statement verifying that the methods used to sample and analyze the chlorine and fluoride content of the coal was based on ASTM method D6721-01(2006) and ASTM D5987 - 96(2007), respectively.

**11.8 Monthly hazardous air pollutant emission calculation.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate the hazardous air pollutant emissions emitted each month as identified in equations 11-2, 11-3, 11-4, and 11-5.

*Equation 11-2*

$$ME = (M) + (HF) + (HCl) + (OH)$$

Where:

- ME = The hazardous air pollutant emissions in tons per year over a calendar month;
- M = The mercury emissions from Unit #13 in tons per year as determined by the continuous emission monitoring system as required in 11.6 for Unit #13;
- HF = The hydrogen fluoride emissions from Unit #13 in tons per year as determined by equation 11-3;
- HCl = The hydrogen chloride emissions from Unit #13 in tons per year as determined by equation 11-4; and
- OH = The total contribution for the other hazardous air pollutant emissions from Unit #13 in tons per year as determined by equation 11-5.

Equation 11-3

$$HF = \frac{(F) \times (CU) \times (1 - HFCE) \times (1.053)}{(1,000,000)}$$

Where:

- HF = The hydrogen fluoride emissions from Unit #13 in tons per year emitted during the month;
- F = The average fluoride content of the coal in parts per million by weight on a wet basis as determined by the coal analysis in condition 11.7. The average shall be based on a minimum of four “weekly composite samples”;
- CU = The amount of coal burned during the month in tons on a wet basis;
- HFCE = The control efficiency based on the most recent performance test as determined in permit condition 7.12 in its decimal form (e.g. 95% equates to 0.95). Until the initial performance test is completed, the control efficiency shall be 0.931;
- 1.053 = A conversion factor to convert fluoride to hydrogen fluoride; and
- 1,000,000 = A conversion factor to convert parts per million to a decimal form.

Equation 11-4

$$HCl = \frac{(Cl) \times (CU) \times (1 - HCICE) \times (1.028)}{(1,000,000)}$$

Where:

- HCl = The hydrogen chloride emissions from Unit #13 in tons per year emitted during the month;
- Cl = The average chloride content of the coal in parts per million by weight on a wet basis as determined by the coal analysis in condition 11.7. The average shall be based on a minimum of four “weekly composite samples”;
- CU = The amount of coal burned during the month in tons on a wet basis;
- HCICE = The control efficiency based on the most recent performance test as determined in permit condition 7.12 in its decimal form (e.g. 95% equates to 0.95). Until the initial performance test is completed, the control efficiency shall be 0.962;
- 1.028 = A conversion factor to convert chloride to hydrogen chloride; and
- 1,000,000 = A conversion factor to convert parts per million to a decimal form.

Equation 11-5

$$\text{Other Haps} = \frac{(137) \times (CHI)}{(2,000)}$$

Where:

- 137 = The emission factor in pounds per trillion Btus for the other identified hazardous air pollutants;
- CHI = The heat input provided from burning coal in Unit #13 as determined by the continuous emission monitoring system required in permit condition 8.4; and

- 2,000 = A conversion factor to convert pounds to tons.

**11.9 Unit #13 case-by-case MACT exemption.** The owner or operator is exempt from a case-by-case MACT determination for Unit #13. The exemption is based on the operational and hazardous air pollutant emission limits in this permit. Any relaxation in a permit condition that increases the hazardous air pollutant emissions equal to or greater than 9.5 tons per 12-month rolling period for a single hazardous air pollutant or 23.8 tons per 12-month rolling period for any combination of hazardous air pollutants shall require a case-by-case MACT determination as though construction had not commenced on Unit #13.

## **12.0 PSD NEW SOURCE PERFORMANCE STANDARDS**

**12.1 New source performance standard for coal preparation plants.** In accordance with ARSD 74:36:07:16, as referenced to 40 CFR §§ 60.250 through 60.254, the owner or operator shall comply with the particulate standards, monitoring, and testing requirements in the standards of performance for coal preparation plants. The specific emission limit from this new source performance standard for Unit #7, #17, #22, #26, #27 and #30 is a 20 percent opacity limit.

**12.2 New source performance standard for stationary compression ignition internal combustion engines.** In accordance with 40 CFR §§ 60.4200 through 60.4219, the owner or operator shall comply with all applicable standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements in the standards of performance for stationary compression ignition internal combustion engines. The specific emission limits from this new source performance standard are as follows:

1. In accordance with 40 CFR §§ 60.4201(a) and 60.4202(d), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #14, #15, #25 and #33 that contain particulate matter in excess of 0.15 grams per horsepower hour;
2. In accordance with 40 CFR §§ 60.4201(a) and 60.4202(d), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #14, #15, #25 and #33 that contain carbon monoxide in excess of 2.6 grams per horsepower hour;
3. In accordance with 40 CFR § 60.4201(a), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #15 that contain nitrogen oxide and non-methane organic compounds in excess of 4.8 grams per horsepower hour; and
4. In accordance with 40 CFR § 60.4202(d), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #14, #25 and #33 that contain nitrogen oxide and non-methane organic compounds in excess of 3.0 grams per horsepower hour.

**12.3 New source performance standard for Unit #13.** In accordance with ARSD 74:36:07:03, as referenced to 40 CFR §§ 60.40Da through 60.51Da, the owner or operator shall comply with all applicable standards and limitations, reporting, monitoring, recordkeeping, testing, and notification



requirements in the standards of performance for electric utility steam generating units for which construction is commenced after September 18, 1978. The specific emission limits from this new source performance standard are as follows:

1. In accordance with 40 CFR § 60.42Da(b), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 which exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. The opacity standard applies at all times except during periods of startup, shutdown, or malfunction. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement;
2. In accordance with 40 CFR § 60.42Da(c), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain particulate matter in excess of 0.14 pounds per megawatt hour gross energy output or 0.015 pounds per million Btu. The particulate standard applies at all times except during periods of startup, shutdown, or malfunction;
3. In accordance with 40 CFR §§ 60.43Da(a) and 60.43Da(i), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain sulfur dioxide in excess of the emission limit specified in Table 12-1.

**Table 12-1 – Sulfur Dioxide Emission Limit**

Unit	Description	Sulfur Dioxide Emission Limit <sup>1</sup>
#13	Super-critical pulverized coal fired boiler	1.4 pounds per megawatt-hour gross energy output, or 5 percent of the potential combustion concentration (95 percent reduction)

<sup>1</sup> – Compliance with the sulfur dioxide limit and percent reduction are based on a 30-day rolling average.

The sulfur dioxide emission standards apply at all times except during periods of startup, shutdown, or when both emergency conditions exist and the procedures defined in the new source performance standard are implemented; and

4. In accordance with 40 CFR §§ 60.44Da(a) and 60.44Da(e)(1), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #13 that contain nitrogen oxide in excess of 1.0 pound per megawatt-hour gross energy output. Compliance with the nitrogen oxide limit is based on a 30-day rolling average. The nitrogen oxide emission standard applies at all times except during periods of startup, shutdown, or malfunction.

**12.4 New source performance standard for nonmetallic mineral process plants.** In accordance with ARSD 74:36:07:27, as referenced to 40 CFR §§ 60.670 through 60.676, the owner or operator shall comply with all applicable standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements in the standards of performance for nonmetallic mineral processing plants. The specific emission limits from this new source performance standard are as follows:

1. In accordance with 40 CFR § 60.672(a)(1), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #20, #21, #24 and #29, that contain particulate matter in excess of 0.022 grains per dry standard cubic foot; and
2. In accordance with 40 CFR §§ 60.672(a)(2) and 60.672(f), the owner or operator shall not cause to be discharged into the atmosphere gases from Unit #20, #21, #24 and #29, that exhibit greater than 7 percent opacity.

### 13.0 PSD GENERAL REQUIREMENTS

**13.1 Construction and operation of source.** In accordance with Administrative Rules of South Dakota (ARSD) 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall construct and operate the units, controls, and processes as described in Table 13-1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated July 20, 2005, and June 20, 2006, unless modified by the conditions of this permit. The application consists of the application forms, updates, supporting data, and supplementary correspondence. If the owner or operator becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in an application, such information shall be promptly submitted. The control equipment shall be operated in a manner that achieves compliance with the conditions of this permit at all times.

*Table 13-1 – Description of Permitted Units, Operations, and Processes*

Unit	Description	Operating Rate	Control Device
#7a	Rotary car dumper building	3,600 tons per hour <sup>1</sup>	Baghouse
#7b			Baghouse
#7c			Baghouse
#7d			Baghouse
#13	Super-critical pulverized coal fired boiler fired on subbituminous coal, ultra low sulfur diesel, or biodiesel. The super-critical pulverized coal fired boiler will be equipped with low NOx burners.	6,000 million Btus per hour heat input <sup>1</sup>	Baghouse, wet flue gas desulfurization and selective catalytic reduction
#14	Fire pump fired on ultra low sulfur diesel and biodiesel	420 horsepower <sup>1</sup>	Catalyzed diesel particulate filter
#15	Generator fired on ultra low sulfur diesel and biodiesel	2,220 kilowatts <sup>1</sup>	Catalyzed diesel particulate filter
#16	Industrial cooling tower with 18 cells	312,540 gallons per minute <sup>1</sup>	Drift eliminators
#17	Coal reclaim system	380 tons per hour <sup>2</sup>	Baghouse
#20	Limestone reclaim conveyor	11 tons per hour <sup>2</sup>	Baghouse
#21	Limestone receiving system	11 tons per hour <sup>2</sup>	Baghouse

Unit	Description	Operating Rate	Control Device
#22	Plant coal transfer and silo fill system	380 tons per hour <sup>2</sup>	Baghouse
#23	Fly ash silo bin vent	28 tons per hour <sup>2</sup>	Baghouse
#24	Limestone day bin vent #1	11 tons per hour <sup>2</sup>	Baghouse
#25	Booster pump (boiler) fired on ultra low sulfur diesel and biodiesel	225 horsepower <sup>1</sup>	Catalyzed diesel particulate filter
#26	Coal plant transfer system	380 tons per hour <sup>2</sup>	Baghouse
#27	Coal crusher house	380 tons per hour <sup>2</sup>	Baghouse
#29	Limestone pre-crusher building	200 tons per hour <sup>1</sup>	Baghouse
#30	Coal stack out system	380 tons per hour <sup>2</sup>	Baghouse
#33	Booster pump (coal area) fired on ultra low sulfur diesel and biodiesel	225 horsepower <sup>1</sup>	Catalyzed diesel particulate filter
#34	Pretreatment soda ash bin vent	20 tons per hour <sup>1</sup>	Baghouse
#35	Pretreatment lime bin vent	20 tons per hour <sup>1</sup>	Baghouse

<sup>1</sup> – The operating rate is the nominal or manufacturer listed operating rate noted in the PSD application and are descriptive only; and

<sup>2</sup> – The operating rates are the annual average rates of the equipment or system noted in the PSD application and is descriptive only.

**13.2 Final design changes.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator is authorized to construct and operate the units, controls, and processes as described in Table 13-1 that differ from the design described in the application without obtaining approval from the Secretary provided the final design does not significantly differ from those described in the application and the final design would still demonstrate compliance with the National Ambient Air Quality Standards and PSD Increments. The term “final design does not significantly differ” is limited to the physical parameters of the units, controls, and processes such as the stack locations, stack heights, stack diameters, etc. The term does not include changes to emission limits, operational limits, recordkeeping requirements, reporting requirements, performance testing requirements, etc. The owner or operator shall notify the Secretary of any such changes and submit documentation that demonstrates compliance with the National Ambient Air Quality Standards and PSD Increments within 60 days of initial startup.

**13.3 Commence construction.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(r)(2), the owner or operator shall commence construction within 18 months of the effective date of permit #28.0803-PSD. If construction is delayed or interrupted for a period of 18 months or more, permit #28.0803-PSD becomes invalid. The owner or operator may apply, before the end of the 18-month period, to the Secretary for an extension. The Secretary may grant an extension after the owner or operator satisfactorily demonstrates that an extension is justified.

**13.4 Submit operating permit application.** In accordance with ARSD 74:36:05:03.01, the owner or operator shall submit a complete permit application to revise permit #28.0801-29 within 12 months after commencing operation of the pulverized coal fired boiler (Unit #13). For the purpose of this condition, commencing operation means the initial startup of the boiler, which is the first date that the boiler was operated when firing pulverized coal. A complete permit application shall include all of the requirements specified in ARSD 74:36:05:12, including periodic monitoring and compliance assurance monitoring activities necessary to assure compliance.

**13.5 Submit acid rain permit application.** In accordance with ARSD 74:36:16:01, the owner or operator shall submit a complete Acid Rain permit application 24 months prior to the initial startup of the pulverized coal fired boiler (Unit #13).

**13.6 Construction date notification.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the date construction commenced on the permanent structures for the pulverized coal fired boiler system (Unit #13). The notification shall be postmarked within 15 days after the date construction commenced.

**13.7 Initial startup notification.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the initial startup date of the pulverized coal fired boiler (Unit #13). The notification shall be postmarked within 15 days after the date of initial startup.

**13.8 Coal handling operational limits.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall limit the operation of Unit #7 and #30 to 18 hours per day for each unit and 5,000 hours per 12-month rolling period for each unit. The first month of the 12-month rolling total shall begin after a reasonable shakedown period. A reasonable shakedown period shall not exceed 180 days from the initial startup of Unit #13.

**13.9 Acid rain requirements for Unit #13.** In accordance with ARSD 74:36:16, the owner or operator shall comply with all applicable standards and limitations, reporting, monitoring, recordkeeping, testing, and notification requirements of the Acid Rain program for Unit #13.

**13.10 Initial performance test for Unit #13.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on Unit #13. The initial performance test shall be conducted to determine emission rates of opacity, particulate matter 10 microns in diameter or less (filterable and condensable), total suspended particulate matter (filterable and condensable), sulfur dioxide, nitrogen oxide, volatile organic compounds as carbon, carbon monoxide, sulfuric acid mist, and fluoride. The initial performance test shall be conducted within 180 days after initial startup of Unit #13.

The owner or operator shall conduct two additional performance tests on Units #13. The two tests shall be conducted to determine emission rates of particulate matter 10 microns in diameter or less (filterable and condensable) and total suspended particulate matter (filterable and condensable). The second test shall be completed within 60 to 180 days after the initial test. The third test shall be completed within 60 to 180 days after the second test.

The owner or operator shall conduct an annual performance test on Unit #13 for particulate matter 10 microns in diameter or less (filterable and condensable), total suspended particulate matter (filterable and condensable), volatile organic compounds as carbon, sulfur acid mist, and fluoride during each calendar year starting with the calendar year after the initial performance tests were completed. Each subsequent performance test shall not be conducted within 180 days after the previous performance test.

**13.11 Initial performance test for Unit #14, #15, #25 and #33.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on Unit #14, #15, #25 and #33. The initial performance tests shall be conducted to determine emission rates of opacity, particulate matter 10 microns in diameter or less (filterable), nitrogen oxide, volatile organic compounds as carbon, and carbon monoxide. The initial performance test shall be conducted within 180 days after initial startup of Unit #13.

The owner or operator shall conduct an additional performance tests on Unit #14, #15, #25, and #33 for opacity, particulate matter 10 microns in diameter or less (filterable), nitrogen oxide, volatile organic compounds as carbon, and carbon monoxide every fifth calendar year after the initial performance test is completed.

**13.12 Initial performance test for other units.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct an initial performance test on the following units:

1. Unit #7a, #7b, #7c, or #7d;
2. Unit #17, #26, or #30;
3. Unit #20 or #21;
4. Unit #22;
5. Unit #23;
6. Unit #24 or #29;
7. Unit #27; and
8. Unit #34 or #35.

The performance tests shall be conducted to determine emission rates of particulate matter 10 microns in diameter or less (filterable). The owner or operator shall conduct the performance tests within 180 days of initial startup of the pulverized coal fired boiler (Unit #13).

The owner or operator shall conduct an additional performance tests for particulate matter 10 microns in diameter or less (filterable) every fifth calendar year after the initial performance test is completed.

**13.13 Initial certification of continuous emission monitoring system.** In accordance with ARSD 74:36:16:04 and ARSD 74:36:19:15, the owner or operator shall conduct the initial certification of each continuous emission monitoring system required in permit condition 13.14 within 180 days of initial startup of Unit #13.

**13.14 Continuous emission monitoring systems.** In accordance with ARSD 74:36:07, ARSD 74:36:09, ARSD 74:36:13, and ARSD 74:36:16, the owner or operator shall install, calibrate, maintain, and operate continuous emission monitoring systems for opacity, carbon dioxide, sulfur dioxide, nitrogen oxide, flue gas flow, and carbon monoxide on Unit #13. The continuous emission monitoring systems shall measure and record the emissions at all times, including periods of startup, shutdown, malfunctions or emergency conditions. Monitor downtime is allowed for system breakdowns, repairs, calibration checks, zero and span adjustments, and when Unit #13 is not in operation.

**13.15 Performance specifications and quality assurance.** In accordance with ARSD 74:36:07, ARSD 74:36:09, ARSD 74:36:13, and ARSD 74:36:16, the continuous emission monitoring systems on Unit #13 shall meet the performance specifications in 40 CFR Part 60, Appendix B and the quality assurance requirements in 40 CFR Part 60, Appendix F; or the performance specifications in 40 CFR Part 75, Appendix A and the quality assurance requirements in 40 CFR Part 75, Appendix B.

**13.16 State opacity limit.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:12:01, the owner or operator may not discharge into the ambient air an air contaminant of a density equal to or greater than that designated as 20 percent opacity from any permitted unit, operation, or process listed in Table 1-1. This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement. An exceedance of the opacity limit is not considered a violation during brief periods of soot blowing, start-up, shutdown, or malfunction. Malfunction means any sudden and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. A failure caused entirely or in part by poor maintenance, careless operation, preventable equipment breakdown, or any other cause within the control of the owner or operator of the source is not a malfunction and is considered a violation.

## **14.0 PSD BEST AVAILABLE CONTROL TECHNOLOGY (BACT) LIMITS**

**14.1 BACT limits for particulate matter.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall not allow the emissions of particulate matter 10 microns in diameter or less (PM10) in excess of the emission limits specified in Table 14-1 for the appropriate permitted unit, operation, and process. Compliance with the PM10 BACT emission limits in Table 14-1 for Unit #13, #14, #15, #25, and #33 during periods of startup, shutdown, and malfunction shall be based on permit condition 14.8.

**Table 14-1 – PM10 BACT Emission Limits**

Unit	Description	PM10 Emission Limit
#7a	Rotary car dumper building	0.005 grains/standard cubic foot (filterable); and 1.2 pounds per hour (filterable) <sup>1</sup>
#7b		0.005 grains/standard cubic foot (filterable); and 1.2 pounds per hour (filterable) <sup>1</sup>
#7c		0.005 grains/standard cubic foot (filterable); and 1.2 pounds per hour (filterable) <sup>1</sup>
#7d		0.005 grains/standard cubic foot (filterable); and 1.2 pounds per hour (filterable) <sup>1</sup>
#13	Super-critical pulverized coal fired boiler	72 pounds/hour (filterable) <sup>1</sup> ; 0.012 pounds/million Btu (filterable) <sup>1</sup> ; and 0.03 pounds/million Btu (filterable and condensable) <sup>1, 2</sup>
#14	Fire pump	New Source Performance Standard – see permit condition 5.7; and 0.1 pounds per hour (filterable) <sup>1</sup>
#15	Generator	New Source Performance Standard – see permit condition 5.7; and 0.7 pounds per hour (filterable) <sup>1</sup>
#17	Emergency reclaim hopper	0.005 grains/standard cubic foot (filterable); and 0.35 pounds per hour (filterable) <sup>1</sup>
#20	Limestone reclaim hopper	0.01 grains/standard cubic foot (filterable); and 0.6 pounds per hour (filterable) <sup>1</sup>
#21	Limestone receiving hopper	0.01 grains/standard cubic foot (filterable); and 0.5 pounds per hour (filterable) <sup>1</sup>
#22	Plant transfer/silo fill system	0.005 grains/standard cubic foot (filterable); and 1.6 pounds per hour (filterable) <sup>1</sup>
#23a	Fly ash silo bin vent	0.01 grains/standard cubic foot (filterable); and 0.9 pounds per hour (filterable) <sup>1</sup>
#23b		0.01 grains/standard cubic foot (filterable); and 0.9 pounds per hour (filterable) <sup>1</sup>
#24	Limestone day bin vent #1	0.01 grains/standard cubic foot (filterable); and 0.3 pounds per hour (filterable) <sup>1</sup>
#25	Booster pump (boiler)	New Source Performance Standard – see permit condition 5.7; and 0.1 pounds per hour (filterable) <sup>1</sup>
#26	Transfer conveyor	0.005 grains/standard cubic foot (filterable); and 0.2 pounds per hour (filterable) <sup>1</sup>
#27	Coal crusher house	0.005 grains/standard cubic foot (filterable); and 0.8

Unit	Description	PM10 Emission Limit
		pounds per hour (filterable) <sup>1</sup>
#29	Limestone pre-crusher building	0.01 grains/standard cubic foot (filterable); and 0.2 pounds per hour (filterable) <sup>1</sup>
#30	Coal stack out system	0.005 grains/standard cubic foot (filterable); and 0.3 pounds per hour (filterable) <sup>1</sup>
#33	Booster pump (coal area)	New Source Performance Standard – see permit condition 5.7; and 0.1 pounds per hour (filterable) <sup>1</sup>
#34	Pretreatment soda ash bin vent	0.01 grains/standard cubic foot (filterable); and 0.1 pounds per hour (filterable) <sup>1</sup>
#35	Pretreatment lime bin vent	0.01 grains/standard cubic foot (filterable); and 0.1 pounds per hour (filterable) <sup>1</sup>

<sup>1</sup> – Compliance with the emission limit is based on the average of three test runs; and

<sup>2</sup> – If the testing per permit condition 13.10 demonstrates an emission rate less than 0.03 pounds per million Btus (filterable and condensable), the emission limit shall be lowered to the average of the three tests (nine test runs) plus two standard deviations or 0.018 pounds per million Btus, whichever is greater. In no case shall the limit be greater than 0.03 pounds per million Btus (filterable and condensable).

**14.2 BACT limits for carbon monoxide.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall not allow the emissions of carbon monoxide in excess of the emission limits specified in Table 14-2 for the appropriate permitted unit, operation, and process. Compliance with the carbon monoxide BACT emission limits in Table 14-2 for #14, #15, #25, and #33 during periods of startup, shutdown, and malfunction shall be based on permit condition 14.8.

**Table 14-2 – Carbon Monoxide BACT Emission Limits**

Unit	Description	Carbon Monoxide Emission Limit
#13	Super-critical pulverized coal fired boiler	900 pounds/hour <sup>1</sup> and 0.15 pounds/million Btu <sup>1</sup>
#14	Fire pump	New Source Performance Standard – see permit condition 12.2 <sup>2</sup>
#15	Generator	New Source Performance Standard – see permit condition 12.2 <sup>2</sup>
#25	Booster pump (boiler)	New Source Performance Standard – see permit condition 12.2 <sup>2</sup>
#33	Booster pump (coal area)	New Source Performance Standard – see permit condition 12.2 <sup>2</sup>

<sup>1</sup> – Compliance with the emission limit is based on a 30-day rolling average; and

<sup>2</sup> – Compliance with the emission limit is based on the average of three test runs.

**14.3 BACT limits for volatile organic compounds as carbon.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall not allow the emissions of volatile organic compounds (VOCs) as carbon in excess of the emission limits specified in Table 14-3 for the appropriate permitted unit, operation, and process. Compliance



with the volatile organic compound as carbon BACT emission limits in Table 14-3 during periods of startup, shutdown, and malfunction shall be based on permit condition 14.8.

**Table 14-3 – Volatile Organic Compound as Carbon BACT Emission Limits**

Unit	Description	VOC as Carbon Emission Limit <sup>1</sup>
#13	Super-critical pulverized coal fired boiler	0.0036 pounds/million Btu
#14	Fire pump	New Source Performance Standard – see permit condition 12.2
#15	Generator	New Source Performance Standard – see permit condition 12.2
#25	Booster pump (boiler)	New Source Performance Standard – see permit condition 12.2
#33	Booster pump (coal area)	New Source Performance Standard – see permit condition 12.2

<sup>1</sup> – Compliance with the emission limit is based on the average of three test runs.

**14.4 BACT limit for sulfuric acid mist.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall not allow the emissions of sulfuric acid mist in excess of the emission limits specified in Table 14-4 for the appropriate permitted unit, operation, and process. Compliance with the sulfuric acid mist BACT emission limits in Table 14-4 during periods of startup, shutdown, and malfunction shall be based on permit condition 14.8.

**Table 14-4 – Sulfuric Acid Mist BACT Emission Limit**

Unit	Description	Sulfuric Acid Mist Emission Limit <sup>1</sup>
#13	Super-critical pulverized coal fired boiler	0.005 pounds/million Btu

<sup>1</sup> – Compliance with the emission limit is based on the average of three test runs.

**14.5 BACT limit for fluoride.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR § 52.21(j)(3), the owner or operator shall not allow the emissions of fluoride in excess of the emission limits specified in Table 14-5 for the appropriate permitted unit, operation, and process. Compliance with the fluoride BACT emission limits in Table 14-5 during periods of startup, shutdown, and malfunction shall be based on permit condition 14.8.

**Table 14-5 – Fluoride BACT Emission Limit**

Unit	Description	Fluoride Emission Limit <sup>1</sup>
#13	Super-critical pulverized coal fired boiler	0.0006 pounds/million Btu

<sup>1</sup> – Compliance with the emission limit is based on the average of three test runs.

**14.6 Paved roads and parking lots.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall pave all haul roads and parking lots within Otter Tail Power Company’s property boundaries at this location.

**14.7 Cooling tower.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall install 0.0005 percent efficient drift eliminators on Unit #16.

**14.8 Compliance with BACT limits during startup, shutdown, and malfunction.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall utilize good work and maintenance practices and manufacturers' recommendations to minimize emissions during, and the frequency and duration of, startup, shutdown, and malfunction events for Unit #13, #14, #15, #25 and #33. The owner or operator shall develop and implement a startup, shutdown, and malfunction plan for Unit #13, #14, #15, #25 and #33. The startup, shutdown, and malfunction plan shall describe, in detail, procedures for operating and maintaining Unit #13, #14, #15, #25 and #33 during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctions; and record keeping requirements identifying that the procedures and corrective actions were completed. The startup, shutdown, and malfunction plan shall be submitted to and approved by the Secretary at least 90 days prior to the initial startup of Unit #13. This permit condition is not applicable to Unit #13 for carbon monoxide.

## **15.0 PSD FUGITIVE DUST CONTROLS**

**15.1 Paved road and parking area controls.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall use a mechanical sweeper that collects particulate and is equipped with wet suppression, use a vacuum sweeper, or water flush all paved roads and parking areas during spring, summer and fall. During winter months or during freezing weather, the paved roads and parking lots shall be cleaned with the mechanical sweeper that collects particulate and is equipped with wet suppression or a vacuum sweeper. An alternative method may be approved by the Secretary if the owner or operator provides documentation that the alternative method is equivalent to the methods specified in this permit condition in controlling fugitive dust emissions. The frequency of cleaning will be on an as needed basis to comply with the opacity limit in permit condition 15.4.

**15.2 Open storage pile control.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall sample and analyze the silt content of open storage piles that have a height greater than or equal to three feet and have a total surface area greater than or equal to 150 square feet. The silt content analysis shall be conducted once per calendar year and in accordance with ASTM C-136 or another equivalent method approved by the Secretary. Silt is defined as any material with a particulate size less than 74 micrometers in diameter and passes through a number 200 sieve. The owner or operator shall implement one of the following control measures for each open storage pile that has a silt content of four percent by weight or greater:

1. Apply chemical stabilizer to the surface area of the open storage pile in a sufficient quantity

- and frequency to comply with the opacity limit in permit condition 15.4;
2. Apply water to the surface area of the open storage pile on an as needed basis to comply with the opacity limit in permit condition 15.4;
  3. Install at least a two-sided enclosure with walls, which extend, at a minimum, to the top of the open storage pile and complies with the opacity limit in permit condition 15.4; or
  4. An alternative method that the owner or operator has demonstrated can comply with the opacity limit in permit condition 15.4 and is approved by the Secretary.

**15.3 Waste pit controls.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall control fugitive dust emissions from a waste pit. A waste pit means an area where particulate matter from the process equipment or pollution control devices is deposited for storage or disposal and the disposal area unit(s) has not been closed. The owner or operator shall implement one of the following control measures for waste pits:

1. Apply a soil cement or similar application that is approved by the Secretary over the entire waste pit area;
2. Apply water spray to adequately create a crusted surface over the entire waste pit area; or
3. Implement a combination of wind protection (wind-fence, wind-screen, three wall enclosures) and soil cement or water spray applications.

Waste pit controls shall be applied or constructed in a manner that maintains compliance with the opacity limit in permit condition 15.4.

**15.4 Opacity limit for fugitive sources.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(8), the owner or operator shall not discharge a visible emission to the ambient air of a density equal to or greater than 20 percent opacity from a paved road or parking lot, open storage pile, track out area, or waste pit. The 20 percent opacity reading is based on a series of two minute averages with a minimum observation period of six minutes. The opacity reading shall be determined by 40 CFR Part 60, Appendix A, Method 9.

If an operation exceeds the opacity limit, the Secretary will allow the owner or operator two opportunities to correct the exceedance with existing controls and/or control measures. In the event of a third exceedance from the same operation, the Secretary will notify the owner or operator that the Best Available Control Measure (BACM) for that operation must be reevaluated. The owner or operator shall reevaluate BACM for that operation and submit a written proposal to the Secretary on the proposed new BACM for the operation within 60 days of receiving the Secretary's notification. The Secretary shall approve or disapprove the proposed new BACM within 60 days of receiving the proposal from the owner or operator.

**15.5 Record keeping requirements for fugitive sources.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall develop,

maintain, and implement a fugitive dust plan. The fugitive dust plan shall be maintained on-site and shall contain the following items:

1. The specific work practice standards that will be implemented as required in permit conditions 15.1, 15.2, and 15.3;
2. The frequency the opacity readings required in permit conditions 15.4 will be conducted; and
3. Documentation that the work practice standards were implemented and a copy of each opacity reading.

## **16.0 MONITORING PLAN**

**16.1 Operation, maintenance, and monitoring plan.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall develop, maintain, and implement a written Operation, Maintenance, and Monitoring plan. The Operation, Maintenance, and Monitoring plan shall be submitted to the Secretary with the application required in permit condition 13.4. Any subsequent changes to the plan must be submitted to the Secretary for review and approval. Pending approval by the Secretary of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

1. Process and control device parameters to be monitored to determine compliance, along with established operating limits or ranges, as applicable, for each emission unit;
2. A monitoring schedule for each emission unit;
3. Procedures for the proper operation and maintenance of each emission unit and each air pollution control device used to meet the applicable emission limits and operating limits in this permit;
4. Procedures for the proper installation, operation, and maintenance of monitoring devices or systems used to determine compliance include:
  - a. Calibration and certification of accuracy of each monitoring device;
  - b. Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems; and
  - c. Ongoing operation and maintenance procedures in accordance with the following requirements:
    - i. Maintain and operate each continuous monitoring system in a manner consistent with good air pollution control practices;
    - ii. Maintain and operate each continuous monitoring system as specified in this permit;
    - iii. Maintain the necessary parts for routine repairs of each continuous monitoring system;
    - iv. Install, operate, and the data verified prior to or in conjunction with conducting performance tests. The verification shall, at a minimum, include completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the system; and

- v. Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all continuous monitoring systems shall be in continuous operation.
5. Procedures for monitoring process and control device parameters.
6. Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the operating limits specified in this permit, including:
  - a. Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
  - b. Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date the corrective action was completed; and
7. A maintenance schedule for each emission unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

**APPENDIX A**

**PHASE II ACID RAIN PERMIT**

**APPLICATION**



# Phase II Permit Application

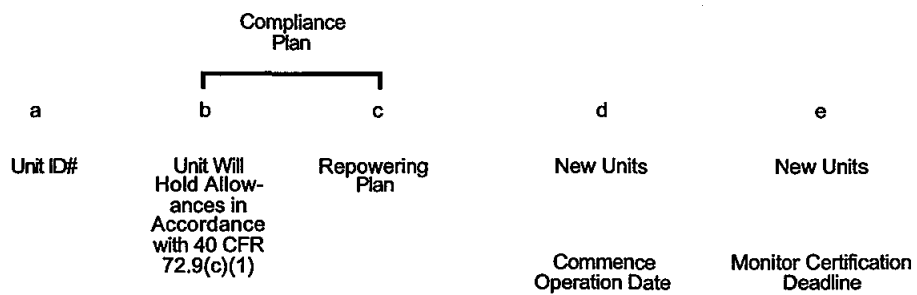
For more information, see instructions and refer to 40 CFR 72.30 and 72.31

This submission is:  New    •     Revised

**STEP 1**  
Identify the source by plant name, State, and ORIS code.

Plant Name	Big Stone Plant	State	SD	6098 ORIS Code
------------	-----------------	-------	----	-------------------

**STEP 2**  
Enter the unit ID# for each affected unit, and indicate whether a unit is being repowered and the repowering plan being renewed by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.



a	b	c	d	e
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units Commence Operation Date	New Units Monitor Certification Deadline
1	Yes	NO		
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

**STEP 3**  
Check the box if the response in column c of Step 2 is "Yes" for any unit.

- For each unit that is being repowered, the Repowering Extension Plan form is included.

**STEP 4**  
**Read the standard requirements and certification, enter the name of the designated representative, and sign and date**

**Standard Requirements**

Permit Requirements.

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  - (ii) Have an Acid Rain Permit.

Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each affected unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Excess Emissions Requirements.

- (1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each affected 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 Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; 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 certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and
  - (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.



(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Big Stone Plant Plant Name (from Step 1)
---

Phase II Permit - Page  
3

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
- (6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7, 72.8, or 72.14 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

**Certification**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Ward Uggerud	
Signature	<i>Ward Uggerud</i>	Date 6-4-01

## **APPENDIX B**

# **NITROGEN OXIDE COMPLIANCE PLAN**



# Phase II NO<sub>x</sub> Compliance Plan

For more information, see instructions and refer to 40 CFR 76.9

This submission is:  New  Revised

**STEP 1**  
Indicate plant name,  
State, and ORIS code  
from NADB, if applicable

Big Stone Plant Name	SD State	6098 ORIS Code
-------------------------	-------------	-------------------

**STEP 2**

Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

ID#	ID#	ID#	ID#	ID#	ID#
1					
Type	Type	Type	Type	Type	Type
CY					

(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)

(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)

(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)

(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)

(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)

(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)

(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)

(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)

(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)

(j) NO<sub>x</sub> Averaging Plan (include NO<sub>x</sub> Averaging form)

(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)

(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO<sub>x</sub> Averaging (check the NO<sub>x</sub> Averaging Plan box and include NO<sub>x</sub> Averaging form)

Big Stone  
Plant Name (from Step 1)

STEP 2, cont'd.

ID#	ID#	ID#	ID#	ID#	ID#
Type	Type	Type	Type	Type	Type

(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)

(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)

(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing

(p) Repowering extension plan approved or under review

STEP 3  
Read the standard requirements and certification, enter the name of the designated representative, sign &

Standard Requirements

**General.** This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

Special Provisions for Early Election Units

**Nitrogen Oxides.** A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO<sub>x</sub> as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).  
**Liability.** The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.  
**Termination.** An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO<sub>x</sub> for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO<sub>x</sub> for Phase II units with Group 1 boilers under 40 CFR 76.7.

Certification

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Ward Uggerud	
Signature	<i>Ward Uggerud</i>	Date 6-4-01