

**Permit #:** 28.1101-15  
**Effective Date:** April 27, 2009  
**Expiration Date:** May 17, 2011

The seal of the State of South Dakota is a circular emblem with a serrated outer edge. It features a central landscape scene with a river, a windmill, and a plow. Above the scene is a banner with the motto "UNDER GOD THE PEOPLE RULE". The words "STATE OF SOUTH DAKOTA" are written in an arc at the top, and "GREAT SEAL" at the bottom. The year "1889" is prominently displayed at the bottom center of the seal.

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

  
Steven M Pirner, Secretary  
Department of Environment and Natural Resources

## **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 under the listed conditions.

**A. Owner**

1. Company Name and Mailing Address  
American Colloid Company  
10881 US Hwy 212 West  
Belle Fourche, SD 57717
2. Actual Source Location if Different from Above  
1 mile West of Belle Fourche, Highway 212
3. Permit Contact  
Tom Byrd, Environment, Health, and Safety  
(605) 892-2591
4. Facility Contact  
Same as above
5. Responsible Official  
Bill Rhoads, Plant Manager  
(605) 892-2591

**B. Permit Revisions or Modifications**

- July 2, 2007 – Minor permit amendment to incorporate the edition of the “Pilot Plant” fluid bed dryer.
- October 9, 2007 – Minor permit amendment to allow the replacement of pollution control equipment (baghouses) for Unit #1 and Unit #2.
- February 21, 2008 – Minor permit amendment to allow changes to equipment associated with Unit #3 and Unit #13.
- March 3, 2008 – Modified to revise the short-term NO<sub>x</sub> emission limit for Unit #1.
- April 27, 2009 – Modified to revise monitoring requirement for chlorine in coal.

**C. Type of Operation**

Bentonite clay processing

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## 1.0 STANDARD CONDITIONS

**1.1 Operation of source.** In accordance with Administrative Rules of South Dakota (ARSD) 74:36:05:16.01(8), the owner or operator shall operate the units, controls, and processes as described in Table #1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated January 4, 2006, April 23, 2007, July 18, 2007, October 30, 2007, December 03, 2007, August 18, 2008, and October 15, 2008, 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.

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

<b>Unit</b>	<b>Description</b>	<b>Maximum Operating Rate</b>	<b>Control Device</b>
<b>#1</b>	<b>BH-01</b> – Coal mill and #2 rotary dryer (D-2) fired with natural gas and subbituminous coal. A multi clone cyclone containing 36 12 inch tubes is used to collect the dried fine clay for further processing.	Rotary dryer process rate is 40 tons per hour with a heat input rating of 32 million Btus per hour. The coal mill has a maximum feed rate of 2 tons per hour.	2000 or newer Carter-Day pulse jet baghouse, model #484-RF-12, 484 bags, 14,800 dry standard cubic feet per minute inlet air flow rate.
<b>#2</b>	<b>BH-02</b> - #3 rotary dryer (D-3) fired with natural gas. A multi clone cyclone containing 36 12 inch tubes is used to collect the dried fine clay for further processing.	Process rate is 50 tons per hour with a heat input rating of 40 million Btus per hour.	2000 or newer Carter-Day pulse jet baghouse, model #484-RF-12, 484 bags, 29,000 dry standard cubic feet per minute inlet air flow rate.
<b>#3</b>	<b>BH-06</b> - #4 new Raymond mill (M-4). A cyclone (CY-03) is used to collect the product.	Process rate is 20 tons per hour.	MikroPul pulse jet baghouse, model #100S-8-20, 100 bags, 3,600 dry standard cubic feet per minute inlet air flow rate.
<b>#4</b>	<b>BH-08</b> – EZ spread tank (T-15) and EZ spread packer (P-5) system.	Process rate is 3 tons per hour.	1981 Kice pulse jet baghouse, model #81S-10-20, 81 bags, 6,012 dry standard cubic feet per minute inlet air flow rate.
<b>#5</b>	<b>BH-10</b> – Old granular screens 1	The old granular	MikroPul pulse jet

Unit	Description	Maximum Operating Rate	Control Device
	through 3 (S-1, S-2, and S-3), Hummer screen (S-4), two Norberg screens (S-5 and S-6), and an aspirator (AS-3).	screens are rated at 7.5 tons per hour per screen. The Hummer and two Norberg screens are rated at 7 tons per hour per screen. The aspirator is rated at 40 tons per hour.	baghouse, model #432S-8-20, 432 bags, 26,562 dry standard cubic feet per minute inlet air flow rate.
#6	<b>BH-12</b> – Two MX-80 tanks (T-33 and T-34), #11 enclosed bucket elevator (E-6), and packer surge bin (SB-3).	The MX-80 tanks are rated at 7 tons per hour per tank. The #11 enclosed bucket elevator and packer surge bin are rated at 20 tons per hour each.	Kice pulse jet baghouse, model #36-8, 36 bags, 2,649 dry standard cubic feet per minute inlet air flow rate.
#7	<b>BH-15</b> –universal elevator (E-10) and #40 Elevators (E-16).	Process rate is 40 tons per hour per unit.	1980 MikroPul pulse jet baghouse, model #121S-8-20, 121 bags, 7,020 dry standard cubic feet per minute inlet air flow rate.
#8	<b>BH-18</b> – St. Regis 4 spout truck load out (P-1), bulk bag loader (BB-7), Howell elevator (E-4), new packer 3 bindicators (P-2), super col elevator (E-2), three packers (P-4), surge bins (SB-2), and Imp hammer mill (M-6).	The St Regis 4 spout truck load out is rated at 30 tons per hour. The bulk bag loader, Howell elevator, new packer 3 bindicators, and super col elevator are rated at 20 tons per hour each. The packager and surge bin are rated at 2 tons per hour each. The Imp hammer mill is rated at 8 tons per hour.	MikroPul pulse jet baghouse, model #480S-8, 480 bags, 21,600 dry standard cubic feet per minute inlet air flow rate.
#9	<b>BH-19</b> – P3 granny packer elevator (E-15) and packer (P-3) system.	Process rate is 25 tons per hour.	MikroPul pulse jet baghouse, model #100S-8-20, 100 bags, 5,859 dry standard cubic feet per

Unit	Description	Maximum Operating Rate	Control Device
			minute inlet air flow rate.
#10	<b>BH-23</b> – ECG bunker (EB-1).	Process rate is 80 tons per hour.	1982 Carborendium pulse jet baghouse, model #225-10-20, 225 bags, 19,499 dry standard cubic feet per minute inlet air flow rate.
#11	<b>BH-24</b> – Railcar loading system (DCL-1) and bulk loading elevator (E-24).	Process rate for both units is 40 tons per hour.	1982 MikroPul pulse jet baghouse, model #121-8-20, 121 bags, 7,020 dry standard cubic feet per minute inlet air flow rate.
#12	<b>BH-43</b> – #2 and #3 side tank bin vents (T-10 and T-11), center elevator (E-17), #1 elevator (E-14), specialty tank (T-7) and yellow system 9 tank (T-14).	The two side tanks bin vents and center elevator are rated at 40 tons per hour per unit. The #1 elevator is rated at 50 tons per hour. The specialty and yellow system 9 tank are rated at 20 tons per hour per unit.	MikroPul pulse jet baghouse, model #240S-8, 240 bags, 15,066 dry standard cubic feet per minute inlet air flow rate. Exhaust from #1 elevator may be routed through BV-01.
#13	<b>BH-44</b> – NS turbo mill (M-8), new system screens 1 and 2 (S-7 and S-8), L elevator (E-12), M elevator (E-8), N elevator (E-9), S elevator (E-7) and three aspirators (AS-2, AS-4, and AS-n) with airflow diverter between AS-2 and N elevator.	The turbo mill is rated at 25 tons per hour. The two screens are rated at 7.5 tons per hour per screen. The four elevators and aspirators are rated at 40 tons per hour per unit.	1985 MikroPul pulse jet baghouse, model #100S-8-20, 100 bags, 12,575 dry standard cubic feet per minute inlet air flow rate.
#14	<b>BV-01</b> – #1 enclosed bucket elevator bin vent (E-14).	Process rate is 50 tons per hour.	1980 MikroPul pulse jet baghouse, model #36-6, 36 bags, 1,800 dry standard cubic feet per minute inlet air flow rate.
#15	<b>BV-02</b> – #2 dry tank bin vent (T-16).	Process rate is 50 tons per hour.	1982 MikroPul pulse jet baghouse, model #16S-6, 16 bags, 1,080 dry standard cubic feet per minute inlet air flow rate.

<b>Unit</b>	<b>Description</b>	<b>Maximum Operating Rate</b>	<b>Control Device</b>
<b>#16</b>	<b>BV-03</b> –#3 dry tank bin vent (T-17).	Process rate is 50 tons per hour.	1982 MikroPul pulse jet baghouse, model #16S-6, 16 bags, 630 dry standard cubic feet per minute inlet air flow rate.
<b>#17</b>	<b>BV-06</b> – Short enclosed bucket elevator bin vent (E-18).	Process rate is 20 tons per hour.	1980 MikroPul pulse jet baghouse, model #16-8, 16 bags, 1,800 dry standard cubic feet per minute inlet air flow rate.
<b>#18</b>	<b>BV-07</b> – “Big” #3 enclosed bucket elevator bin vent (E-23).	Process rate is 50 tons per hour.	1978 MikroPul pulse jet baghouse, model #48-8, 48 bags, 1,440 dry standard cubic feet per minute inlet air flow rate.
<b>#19</b>	<b>BV-08</b> – #8 enclosed bucket elevator bin vent (E-21).	Process rate is 50 tons per hour.	1978 MikroPul pulse jet baghouse, model #16-6, 16 bags, 1,440 dry standard cubic feet per minute inlet air flow rate.
<b>#20</b>	<b>BV-10</b> –SuperCol Tank bin vent (T-42).	Process rate is 50 tons per hour.	1980 MikroPul pulse jet baghouse, model #16S-6, 16 bags, 630 dry standard cubic feet per minute inlet air flow rate.
<b>#21</b>	<b>BV-11</b> – DCL surge bin vent (SB-7).	Process rate is 40 tons per hour.	1980 MikroPul pulse jet baghouse, model #16S-8, 16 bags, 1,440 dry standard cubic feet per minute inlet air flow rate.
<b>#22a</b>	<b>BV-12</b> – System 9 Tank bin vent (T-8).	Pneumatic transfer rate is 7 tons per hour.	1980 MikroPul pulse jet baghouse (south end), model #36-8, 36 bags, 2,125 dry standard cubic feet per minute inlet air flow rate.
<b>#22b</b>	<b>BV-13</b> – System 9 Tank bin vent (T-9).	Pneumatic transfer rate is 7 tons per hour.	1980 MikroPul pulse jet baghouse (north end), model #36-8, 36 bags, 2,125 dry standard cubic feet per minute inlet air

<b>Unit</b>	<b>Description</b>	<b>Maximum Operating Rate</b>	<b>Control Device</b>
			flow rate.
<b>#23</b>	<b>BV-14</b> – Short SG-40 enclosed bucket elevator bin vent (E-22).	Process rate is 30 tons per hour.	1980 MikroPul pulse jet baghouse, model #48-8, 48 bags, 2,250 dry standard cubic feet per minute inlet air flow rate.
<b>#24</b>	<b>BV-16</b> – Reclaim enclosed bucket elevator bin vent (E-20).	Process rate is 80 tons per hour.	1980 MikroPul pulse jet baghouse, model #16-6, 16 bags, 1,080 dry standard cubic feet per minute inlet air flow rate.
<b>#25</b>	<b>BL-01</b> – 1980 Bethlehem steam boiler fired with natural gas.	Heat input rate is 7.3 million Btus per hour.	Not applicable.
<b>#26</b>	<b>BK-02</b> – Blaw-Knox dryer #2. Steam provided by BL-01	Process rate is 350 pounds per hour	Not applicable.
<b>#27</b>	<b>BK-03</b> – Blaw-Knox dryer #3. Steam provided by BL-01	Process rate is 350 pounds per hour	Not applicable.
<b>#28</b>	<b>WP-01</b> – 1987 Mikro ACM pulverizer specialty clay micro mill (MM-1) and 1980 Chantland specialty clay packer (BP-1).	Process is 2 tons per hour per unit.	1980 MikroPul pulse jet baghouse, 100 bags, 5,850 dry standard cubic feet per minute inlet air flow rate (Collects product from mill).
<b>#29</b>	<b>WP-05</b> – 1983 agglomerate dryer (VBD-1). The dryer is fired with natural gas.	Process rate is 12 tons per hour; but blender limits the process rate to 2 tons per hour. The heat input rating is 15 million Btus per hour.	1983 MikroPul pulse jet baghouse, 121 bags, 5,005 dry standard cubic feet per minute inlet air flow rate.
<b>#30</b>	<b>BV-05</b> – Packer surge bin vent (SB-5).	Process rate is 25 tons per hour.	1990 MikroPul pulse jet baghouse, model #16-6, 16 bags. Exhaust air emitted indoors.

**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 Law (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;
  - b. Compliance methods specified in an applicable plan; and
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, 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 or pollutant sampling and 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.

**3.7 Equipment replacement.** In accordance with ARSD 74:36:07:27, as referenced to 40 CFR § 60.670(d), the replacement of existing equipment not subject to 40 CFR § 60.670 with a piece of equipment of equal or smaller size having the same function as the existing equipment is exempt from the provisions in 40 CFR §§ 60.672, 60.674, and 60.675. An owner or operator that

replaces all existing equipment in a production line does not qualify for this exemption. The owner or operator seeking to qualify for this exemption must submit the following information about the existing equipment and the replacement equipment:

1. The rated capacity in tons per hour of the existing and replacement crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station;
2. The total surface area of the top screen for the existing screen and the replacement screen;
3. The width of the existing and replacement conveyor belt; and
4. The rated capacity in tons of existing and replacement storage bin.

The exemption notification shall be submitted in accordance with permit condition 3.1 and the replacement of existing equipment that qualifies for this exemption shall be considered a minor permit amendment.

## **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, 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 must maintain a monitoring log. The monitoring log shall contain the following information:

1. Maintenance schedule for each baghouse listed in Table #1 of this permit. At a minimum, the maintenance schedule shall meet the manufacturer’s recommended schedule for maintenance;
2. The following information should be recorded for maintenance:
  - 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. Initials or signature of person performing maintenance.
3. The following information should be recorded for each visible emission reading:
  - 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; and
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 at the time being properly operated.

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

1. The amount of particulate matter less than or equal to 10 microns in diameter (PM10), in tons, emitted into the ambient air from the permitted units during the month. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values. The amount of PM10 emitted to the ambient air from permitted units shall be calculated using the most recent performance test that demonstrates compliance with the appropriate particulate matter emission limit, emission factors from the statement of basis, or other methods as approved by the Secretary;
2. The amount of sulfur dioxide, in tons, emitted into the ambient air from the permitted units during the month. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values. The amount of sulfur dioxide emitted to the ambient air from permitted units shall be calculated using the most recent performance test that demonstrates compliance with the appropriate sulfur dioxide emission limit, emission factors from the statement of basis, or other methods as approved by the Secretary;
3. The amount of nitrogen oxide, in tons, emitted into the ambient air from the permitted units during the month. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values. The amount of nitrogen oxide emitted to the ambient air from permitted units shall be calculated using the most recent performance test that demonstrates compliance with the appropriate nitrogen oxide emission limit, emission factors from the statement of basis, or other methods as approved by the Secretary;
4. The amount of carbon monoxide, in tons, emitted into the ambient air from the permitted units during the month. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values. The amount of carbon monoxide emitted to the ambient air from permitted units shall be calculated using the most recent performance test, emission factors from the statement of basis, or other methods as approved by the Secretary; and
5. The amount of hydrogen chloride, in tons, emitted into the ambient air from the permitted units during the month. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values. The monthly amount of hydrogen chloride emitted to the ambient air from permitted units shall be calculated as identified in permit condition 8.4.

**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 of particulate less than or equal to 10 microns in diameter, sulfur dioxide, nitrogen oxide, carbon monoxide, and hydrogen chloride emissions, in tons;
2. The amount of natural gas and subbituminous coal used in each permitted unit;
3. The number of hours each permitted unit was operated; and
4. Documentation necessary to demonstrate the information in subsection (1), (2), and (3) are accurate.

**5.7 Initial notification of subbituminous coal usage.** In accordance with ARSD 74:36:05:16.01(14), the owner or operator shall notify the Secretary of the actual date of initial startup of Unit #1 (BH-01) when fired with subbituminous coal. The initial startup is defined as the first time subbituminous coal is burned in Unit #1. The initial startup notification shall be postmarked within 15 days after such date and contain the following information:

1. Identify submittal as initial startup notification;
2. Name of facility, permit number, and reference to this permit condition; and
3. Actual date of initial startup of firing subbituminous coal in Unit #1.

**5.8 Quarterly reporting.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a quarterly report to the Secretary by the end of each calendar quarter. The quarterly report shall contain the following information:

1. Name of facility, permit number, reference to this permit condition, identifying the submittal as a quarterly report, and calendar dates covered in the reporting period; and
2. The quantity of particulate matter less than or equal to 10 microns in diameter, sulfur dioxide, nitrogen oxide, carbon monoxide, and hydrogen chloride emitted, in tons, in each month and the 12-month rolling total for each month in the reporting period and supporting documentation.

The first quarterly report must be postmarked no later than 30 days after the end of the calendar quarter in which initial startup occurred. The remaining reports must be postmarked no later than 30 days after the end of the reporting period (i.e., April 30<sup>th</sup>, July 30<sup>th</sup>, October 30<sup>th</sup>, and January 30<sup>th</sup>).

**5.9 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; and
4. Certification statement required in permit condition 5.3.

**5.10 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.

**5.11 Fluid bed dryer emissions.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall obtain written approval from the Secretary before emissions from the “Pilot Plant” Fluid Bed Dryer may be vented to the ambient air. The emissions from the “Pilot Plant” Fluid Bed Dryer shall be emitted indoors.

**5.12 Initial notification of Unit #1 and #2 baghouse replacement.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall notify the Secretary of the actual date of initial startup of the replacement pollution control equipment associated with Unit #1 and Unit #2. The initial startup is defined as the first time exhaust for the unit passes through the pollution control equipment. The initial startup notification shall be postmarked within 15 days after such date.

## **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, except Unit #13 (BH-44) and #30 (BV-05). This provision does not apply when the presence of uncombined water is the only reason for failure to meet the requirement.

**6.2 Visibility limit for Unit #13 (BH-44).** In accordance with ARSD 74:36:07:27, as referenced to 40 CFR § 60.672(a)(2), the owner or operator shall not discharge into the ambient air from BH-44, any visible emissions greater than that designated as 7 percent opacity.

**6.3 Visibility limit for Unit #30 (BV-05).** In accordance with ARSD 74:36:07:27, as referenced to 40 CFR § 60.672(e)(2), the owner or operator shall not discharge into the ambient air from the building enclosing BV-05, any visible fugitive emissions.

**6.4 Visibility exceedances.** In accordance with ARSD 74:36:12:02 and ARSD 74:36:07:01, as referenced to 40 CFR § 60.11(c), an exceedance of the operating limit in permit conditions 6.1, 6.2, and 6.3 is not considered a violation during brief periods of start-up, shutdown, or malfunctions. An exceedance of the operating limit in permit condition 6.1 is also not considered a violation during brief periods of soot blowing. 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.

**6.5 Total suspended particulate matter limits.** In accordance with ARSD 74:36:06:02(1) and 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 #2 for the appropriate permitted unit, operation, and process.

**Table #2 – Total Suspended Particulate Matter Emission Limit**

Unit	Description	Total Suspended Particulate Matter Emission Limit
#25	BL-01 – Bethlehem boiler	0.6 pounds per million Btus heat input
#26	BK-02 – Blaw-Knox dryer #2	1.3 pounds per hour
#27	BK-03 – Blaw-Knox dryer #3	1.3 pounds per hour

**6.6 Particulate matter limits.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not allow the emission of total suspended particulate matter or particulate matter less than or equal to 10 microns in diameter in excess of 0.02 grains per dry standard cubic foot from the units in Table #1, except Units #25, #26, #27, and #30.

**6.7 Sulfur dioxide limits.** In accordance with ARSD 74:36:06:02(2), 74:36:06:03(2), and 74:36:05:16.01(8), the owner or operator shall not allow the emission of sulfur dioxide in excess of the emission limit specified in Table #3 for the appropriate permitted unit, operations, and process.

**Table #3 – Sulfur Dioxide Emission Limit**

Unit	Description	Fuel	Emission Limit
#1	BH-01 – #2 rotary dryer	Natural gas	3.0 pounds per million Btu heat input
		Subbituminous coal	18.3 pounds per hour
#2	BH-02 – #3 rotary dryer	Natural gas	3.0 pounds per million Btu heat input
#25	BL-01 – Bethlehem boiler	Natural gas	3.0 pounds per million Btu heat input

Unit	Description	Fuel	Emission Limit
#29	WP-05 – Agglomerate dryer	Natural gas	3.0 pounds per million Btu heat input

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

Compliance with the sulfur dioxide emission limit while burning subbituminous coal is based on the stack performance test required in permit condition 7.9, any additional stack performance tests required in permit condition 7.1, and the sulfur content of the subbituminous coal.

**6.8 Nitrogen oxide limit for Unit #1.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not allow the emissions of nitrogen oxide from Unit #1 while burning subbituminous coal to exceed 45.0 pounds per hour. Compliance with the nitrogen oxide emission limit shall be based on the stack performance test required in permit condition 7.9 and any additional stack performance tests required by permit condition 7.1.

**6.9 Sulfur content of subbituminous coal.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not burn subbituminous coal in Unit #1 (BH-01) with a sulfur content greater than the sulfur content measured during a stack test that demonstrates compliance with the sulfur dioxide emission limit in permit condition 6.7.

**6.10 Plant wide particulate matter emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the total suspended particulate and particulate less than or equal to 10 microns in diameter emissions from the permitted equipment to less than or equal to 238 tons per 12-month rolling period.

**6.11 Plant wide sulfur dioxide emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the sulfur dioxide emissions from the permitted equipment to less than or equal to 238 tons per 12-month rolling period.

**6.12 Plant wide nitrogen oxide emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the nitrogen oxide emissions from the permitted equipment to less than or equal to 238 tons per 12-month rolling period.

**6.13 Plant wide carbon monoxide emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the carbon monoxide emissions from the permitted equipment to less than or equal to 238 tons per 12-month rolling period.

**6.14 Plant wide hydrogen chloride emission limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall limit the hydrogen chloride emissions from the permitted equipment to less than or equal to 9.5 tons per 12-month rolling period.

**6.15 Air emission exceedances – emergency conditions.** In accordance with ARSD 74:36:05:16.01(18), the Secretary will allow for an emission exceedance of 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.

**6.16 Circumvention not allowed.** In accordance with ARSD 74:36:05:47.01 and ARSD 74:36:07:01, as referenced to 40 CFR § 60.11(d), 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.

**6.17 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 during the term of this permit based on but not limited to record keeping, fuel analysis, periodic visible emission readings, and inspections. 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 than 90 percent of a unit's 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 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 Particulate matter performance tests.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a stack performance test on Units #1 (BH-01), #2 (BH-02), #4 (BH-08), #5 (BH-10), #6 (BH-12), #8 (BH-18), #9 (BH-19), #10 (BH-23), #12 (BH-43), #13 (BH-44) and #19 (BV-08). The stack performance test shall be conducted to determine particulate less than or equal to 10 microns in diameter (PM10) emission rates and demonstrate compliance with permit condition 6.6. The performance test shall be conducted while Unit #1 is

fired solely with natural gas. A stack performance test on Unit #1, #2, #4, and #13 shall be conducted within 60 days of permit issuance. A stack performance test on Unit #5, #6, #8, and #9 shall be conducted within 365 days of permit issuance. A stack performance test on Unit #10, #12, and #19 shall be conducted within 730 days of permit issuance.

The particulate performance test shall determine both the total suspended particulate and PM10 emission rates. The owner or operator may use the total suspended particulate performance test results as the result for the PM10 performance test if the total suspended particulate test demonstrates compliance with PM10 emissions limits.

The issued date referred to in this permit condition was the renewal permit issue date of May 17, 2006.

**7.8 Additional performance tests on Unit #1 and #2.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a carbon monoxide performance test on Unit #1 (BH-01) and #2 (BH-02) within 60 days of permit issuance. The performance test shall be conducted while BH-01 and BH-02 are fired solely with natural gas.

The issued date referred to in this permit condition was the renewal permit issue date of May 17, 2006.

**7.9 Performance tests on Unit #1 while burning subbituminous coal.** In accordance with ARSD 74:36:11:02 and ARSD 74:36:05:16.01(9), the owner or operator shall conduct performance tests on Unit #1 (Dryer 2). The performance tests shall be conducted annually starting in calendar year 2008 and shall occur while Unit #1 is fired with subbituminous coal. The performance tests shall determine the nitrogen oxide emission rate and the coal firing rate. The nitrogen oxide emission rate will determine compliance with the short term nitrogen oxide emission limit of this permit and the coal firing rate will be used to develop Unit #1's coal firing capacity.

If compliance with this permit is demonstrated in three consecutive annual performance tests (the first being the performance test conducted in calendar year 2008), the owner or operator may revert to a performance testing frequency of once every five years. If noncompliance is revealed during any subsequent performance test, performance testing will revert to an annual frequency. Thereafter, the owner or operator may revert to a frequency of once every five years if two consecutive annual performance tests demonstrate compliance with this permit.

**7.10 Initial replacement baghouse performance tests.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a stack performance test on Unit #1 and #2 within 60 days of the initial startup of the replacement baghouse for the appropriate unit. The stack performance test for Unit #1 shall consist of two tests: one while burning natural gas; and one while burning subbituminous coal.

The stack performance tests shall determine both the total suspended particulate and particulate less than or equal to 10 microns in diameter (PM10) emission rates. The owner or operator may use the total suspended particulate performance test results as the result for the PM10

performance test if the total suspended particulate test demonstrates compliance with the PM10 emissions limit.

**7.11 2009 hydrogen chloride performance tests on Unit #1.** In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a performance tests on Unit #1 (Dryer 2) prior to December 31, 2009. The performance tests shall be conducted while Unit #1 is fired with subbituminous coal. The performance test shall determine the hydrogen chloride emission rate. The coal firing rate shall be monitored and recorded during each of three test runs. A grab sample shall be taken of the coal being fired during each performance test runs and analyzed to determine its chlorine content. The hydrogen chloride testing may occur at the regularly scheduled 2009 performance test required by Permit Condition 7.9.

## **8.0 MONITORING**

**8.1 Periodic monitoring for opacity limits.** In accordance with ARSD 74:36:13:07, the owner or operator shall demonstrate compliance with the opacity limits in permit conditions 6.1 and 6.2 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 malfunctions. Visible emission readings on each unit subject to an opacity limit in permit conditions 6.1 and 6.2 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 permit conditions 6.1 and 6.2. The emission test shall be for six minutes and conducted in accordance with 40 CFR Part 60, Appendix A, Method 9. The visible emission tests must be conducted while the unit is in operation; but not during periods of startup, shutdown, or malfunctions. 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 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 8.3, 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 Periodic monitoring for the building enclosing Unit #30.** In accordance with ARSD 74:36:13:07, the owner or operator shall demonstrate compliance with the opacity limit in permit condition 6.3 on a periodic basis. If there are no visible emissions from the building enclosing Unit #30 (BV-05), periodic monitoring shall consist of a visible emission reading of each side of the building, the roof, and the enclosure for the bucket elevator that is outside the building. The visible emission reading shall consist of a two-minute visual survey of each side of the building, the roof, and the enclosure for the bucket elevator that is outside the building 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 malfunctions. The visible emission readings shall be based on the following frequency:

- 1. The owner or operator shall conduct a visible emission reading once per calendar month;
- 2. 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
- 3. 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.

If visible emissions are observed, the owner or operator shall conduct a performance test on the building enclosing BV-05 to demonstrate compliance with permit condition 6.3. In accordance with ARSD 74:36:07:27, as referenced to 40 CFR § 60.675(d), Method 22 shall be used to determine the fugitive opacity. The performance test shall be at least 75 minutes in duration, with each side of the building, the roof, and the enclosure for the bucket elevator that is located outside the building being observed for at least 15 minutes.

**8.3 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.

**8.4 Monitoring sulfur content of subbituminous coal.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall obtain a fuel supplier certification for each shipment of subbituminous coal purchased or received. The fuel supplier certification shall include the name of the fuel supplier and the sulfur content in the subbituminous coal in percent sulfur by weight.

In the case where a fuel supplier certification is not obtained, the owner or operator shall collect a grab sample from the subbituminous coal storage pile prior to burning the subbituminous coal. The grab sample shall be analyzed to determine the sulfur content of the subbituminous coal.

**8.5 Monitoring hydrogen chloride and chlorine content of subbituminous coal.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall collect a grab sample from each shipment of subbituminous coal received. Once per calendar month, the grab samples collected shall be mixed and a grab sample of the mixture analyzed to determine the chlorine content of the subbituminous coal in percent chlorine by weight.

In lieu of sampling, the owner or operator may obtain a fuel supplier certification for each shipment of subbituminous coal purchased or received. The fuel supplier certification shall include the name of the fuel supplier and the chlorine content in the subbituminous coal in percent chlorine by weight.

The hydrogen chloride emissions shall be calculated each month based on equations 8-1 or 8-2. The owner or operator shall initially use equation 8.1 until the performance test in condition 7.11 has been completed. Once the performance test has been completed and the Secretary approves the results of the performance test, the owner or operator shall use equation 8-2.

*Equation 8-1*

$$\text{Monthly Emissions} = \left( \frac{1.2 \text{ pounds}}{\text{tons coal}} \right) \times (\text{Tons Coal Used}) \div \left( \frac{2000 \text{ pounds}}{\text{ton}} \right)$$

Where: Monthly Emissions = the monthly hydrogen chloride emissions in tons

Coal Usage = the tons of coal burned in Unit #1 during the calendar month.

Equation 8-2

$$\text{Monthly Emissions} = (\text{Chlorine Content}) \times (\text{Tons Coal Used})$$

Where: Monthly Emissions = the monthly hydrogen chloride emissions in tons

Chlorine Content = the percent chlorine by weight determined for the monthly composite sample in its decimal form

Coal Usage = the tons of coal burned in Unit #1 during the calendar month.

## 9.0 EXEMPTIONS

**9.1 Prevention of significant deterioration exemption.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator is exempt from needing a Prevention of Significant Deterioration permit. The exemption is due to operational restrictions in permit conditions 6.6, 6.7, 6.8, and 6.10 through 6.13, inclusive that maintain particulate, sulfur dioxide, nitrogen oxide, and carbon monoxide air pollutant emissions less than the major source threshold of 250 tons per year under the Prevention of Significant Deterioration program. Any relaxation in the operational restriction will require the source to obtain a Prevention of Significant Deterioration permit before the modification occurs.

**9.2 Maximum achievable control technology exemption.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator is exempt from needing to conduct and comply with a case-by-case maximum achievable control technology standard. The exemption is due to the operational restrictions in permit condition 6.14 that maintains hydrogen chloride air pollutant less than the major source threshold of 10 tons per year of a single hazardous air pollutant under the Title V air quality operating permit program. Any relaxation in the operational restriction will require the source to conduct and implement a case-by-case Maximum Achievable Control Technology standard permit before the modification occurs.