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) at the location designated below and under the listed conditions:

A. Owner

1. Company Name and Address

   South Dakota Soybean Processors
   PO Box 500
   100 Caspian Avenue
   Volga, South Dakota 57071

2. Actual Source Location and Mailing Address

   South Dakota Soybean Processors
   PO Box 500
   100 Caspian Avenue
   Volga, South Dakota 57071

3. Permit Contact

   Paul Evenson
   Safety/Environmental Coordinator
   605-627-6394

4. Facility Contact

   Paul Evenson
   Safety/Environmental Coordinator
   605-627-6394

5. Responsible Official

   Rodney Christianson
   CEO
   605-627-9240
B. Permit Revisions or Modifications

Not applicable

C. Type of Operation

South Dakota Soybean Processors operates a soybean oil production facility.
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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 1-1 in accordance with the statements, representations, and supporting data contained in the complete permit application submitted and dated January 22, 2004 and August 2, 2006, unless modified by the conditions of this permit. Except as otherwise provided herein, the control equipment shall be operated in a manner that achieves compliance with the conditions of this permit at all times. 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 1-1 – Description of Permitted Units, Operations, and Processes

<table>
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<th>Unit</th>
<th>Description</th>
<th>Maximum Operating Rate</th>
<th>Control Device</th>
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<tr>
<td>#1</td>
<td>EP-#1 – Truck and railcar soybean receiving system consists of two truck receiving pits, a rail car receiving pit, and an underground belt conveyor system.</td>
<td>900 tons per hour or 30,000 bushels per hour</td>
<td>Baghouse (R10)</td>
</tr>
<tr>
<td>#2</td>
<td>EP-#2 – Soybean handling, storage, and cleaning process consists of a scalper, de-stoner, hammer mill, and the transfer of soybeans to storage bins. The transfer system consists of the transfer of soybeans from the pre-cleaning building to storage bins, storage bins to dryer, and dryer to day tanks.</td>
<td>150 tons per hour or 5,000 bushels per hour</td>
<td>Baghouse (R11)</td>
</tr>
<tr>
<td>#3</td>
<td>EP-#3 – 1995 Berico soybean dryer system fired with natural gas.</td>
<td>Process rate = 126 tons per hour and heat input = 20.4 million Btus per hour</td>
<td>Cyclone – emits indoors</td>
</tr>
<tr>
<td>#4</td>
<td>EP-#4 – Soybean screened and cleaned with aspiration, each with a separate process cyclone.</td>
<td>125 tons per hour</td>
<td>Baghouse (P8)</td>
</tr>
<tr>
<td>#5</td>
<td>EP-#5 – Soybean cracking process consists of four Roskamp cracking mills, transportation system, and a process cyclone.</td>
<td>138 tons per hour</td>
<td>Baghouse (P42)</td>
</tr>
<tr>
<td>Unit</td>
<td>Description</td>
<td>Maximum Operating Rate</td>
<td>Control Device</td>
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<td>#6</td>
<td>EP-#6 – Primary soybean de-huller operation with aspirators and a process cyclone.</td>
<td>119 tons per hour</td>
<td>Baghouse (P17)</td>
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<td>#18</td>
<td>EP-#7 – Coarse soybean de-huller operation with aspiration and a process cyclone.</td>
<td>11 tons per hour</td>
<td>Baghouse (P20)</td>
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<td>#47</td>
<td>EP-#8 – Fines soybean de-huller operation with aspiration.</td>
<td>6 tons per hour</td>
<td>Baghouse (P21)</td>
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<tr>
<td>#8</td>
<td>EP-#9 – Six 1995 Roskamp and two 1999 Roskamp flakers.</td>
<td>110 tons per hour</td>
<td>Cyclone (P36)</td>
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<td>#21</td>
<td>EP-#10 – Flake expanding process. The process consists of flakes and fines exposed to steam and pressure to form a collet and transportation to the extraction process. A Cyclone (P65) collects the product</td>
<td>71 tons per hour</td>
<td>Not applicable</td>
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<td>#14a</td>
<td>EP-#12 – Desolventizer, toaster, dryer, and cooler system.</td>
<td>113 tons per hour</td>
<td>Kice single cyclone (E14A)</td>
</tr>
<tr>
<td>#14b</td>
<td>EP-#12 – Desolventizer, toaster, dryer, and cooler system.</td>
<td>113 tons per hour</td>
<td>Kice single cyclone (E14B)</td>
</tr>
<tr>
<td>#14c</td>
<td>EP-#12 – Desolventizer, toaster, dryer, and cooler system.</td>
<td>113 tons per hour</td>
<td>Kice single cyclone (E14C)</td>
</tr>
<tr>
<td>#14d</td>
<td>EP-#12 – Desolventizer, toaster, dryer, and cooler system.</td>
<td>113 tons per hour</td>
<td>Kice single cyclone (E14D)</td>
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<tr>
<td>#9</td>
<td>EP-#13 – 1995 Roskamp Champion meal sizing process. The meal sizing process involves two grinders and two sifters.</td>
<td>83 tons per hour</td>
<td>Baghouse (M9)</td>
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<tr>
<td>#12</td>
<td>EP-#14 – Meal handling and storage consisting of conveyors, blenders, and storage tanks.</td>
<td>200 tons per hour</td>
<td>Baghouse (L7)</td>
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<tr>
<td>#10</td>
<td>EP-#15 – Two 1995 Champion hull grinders and a process cyclone used to convey hull to storage tanks.</td>
<td>8.1 tons per hour</td>
<td>Baghouse (HP1)</td>
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<td>#20</td>
<td>EP-#16 – Hull pelletizer and cooler</td>
<td>8 tons per hour</td>
<td>Cyclone (HP5)</td>
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<tr>
<td>#13a</td>
<td>EP-#17 – Pneumatic transfer of ground hulls from receiving and hull grinding to two hull storage bins.</td>
<td>9 tons per hour</td>
<td>Baghouse (P34 – D1)</td>
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<tr>
<td>#13b</td>
<td>EP-#17 – Pneumatic transfer of ground hulls from receiving and hull grinding to two hull storage bins.</td>
<td>9 tons per hour</td>
<td>Baghouse (P34 – D2)</td>
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<td>#11</td>
<td>EP-#18 – Meal and hull load out using one truck load out and one railcar load out. Both loadout areas have a cover.</td>
<td>200 tons per hour</td>
<td>Baghouse (L26)</td>
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<tr>
<td>Unit</td>
<td>Description</td>
<td>Maximum Operating Rate</td>
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</tr>
<tr>
<td>#22</td>
<td>EP-#19 – Refining additive system. Clay, tricyl and diatomatious earth delivered in bulk material bags and is gravimetrically feed to the feed bins.</td>
<td>5 tons per hour</td>
<td>Baghouse (DC 487)</td>
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<td>#15</td>
<td>EP-#20a – Boiler A, 1996 Nebraska boiler fueled with natural gas, distillate oil, and biodiesel.</td>
<td>70 million Btus per hour heat input or 50,000 pounds of steam per hour heat output</td>
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<td>EP-#20b – Boiler B, 1996 Nebraska boiler fueled with natural gas, distillate oil, and biodiesel.</td>
<td>70 million Btus per hour heat input or 50,000 pounds of steam per hour heat output</td>
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<td>EP-#21 – Cooling tower.</td>
<td>Not applicable</td>
<td>Not applicable</td>
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<td>#48</td>
<td>Mineral oil and miscella exchanger system; waste water extractor system; and a second stage evaporator, oil stripper, and evaporator and stripper condensers.</td>
<td>Not applicable</td>
<td>Mineral oil scrubber</td>
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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-1-39 and 34A-1-47, 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, 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, the proposed changes to the permit, and whether the requested revisions are for an administrative permit amendment, minor permit amendment, or permit modification.

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. As provided in ASRD 74:36:01:03, 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. As provided in ASRD 74:36:04:20:02, 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 defined in ARSD 74:36:01:10 as a physical change in or change in the operation of a source that results in at least one of the following:

1. An increase in the amount of an air pollutant emitted by the source or results in the emission of an air pollutant not previously emitted;
2. A significant change to existing monitoring, reporting, or record keeping requirements in the permit;
3. The change requires or changes 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. The change seeks to establish or change a permit term or condition for which there is a corresponding underlying applicable requirement that the source has assumed to avoid an applicable requirement, a federally enforceable emissions cap assumed to avoid classification as a modification under a provision of the Title I of the Clean Air Act, or an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Clean Air Act.

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.
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 Recordkeeping 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 unless otherwise specified in this permit. 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 and ARSD 74:36:05:16.01, 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 for each unit listed in Table 1-1, except Unit #5, #6, #9, #11, and #12. 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. The following information shall 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;
   e. Signature of person performing maintenance;

2. 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;

3. 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

4. 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 **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.

5.6 **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.

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, except Unit #1, #2, #3, and #4. 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 malfunctions. 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/or 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.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>Emission Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>#15</td>
<td>Boiler A and B</td>
<td>0.5 pounds per million Btus heat input</td>
</tr>
<tr>
<td>#20</td>
<td>Hull pelletizer and cooler</td>
<td>15.8 pounds per hour</td>
</tr>
<tr>
<td>#21</td>
<td>Flake Expanding System</td>
<td>46.0 pounds per hour</td>
</tr>
</tbody>
</table>

6.4 **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.

6.5 **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.

6.6 **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. 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 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 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.** In accordance with ARSD 74:36:11:01, 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 Performance test on Unit #8 and #14. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a performance test on Unit #8 and one of the stacks associated with Unit #14 (Unit #14a, #14b, #14c, or #14d) within 90 days of the issuance of this permit. The performance test shall determine the emission rate for particulate matter 10 microns in diameter or less. The owner or operator may conduct the performance test for total suspended particulate matter if the results of the test demonstrate compliance with the emission limit in permit condition 14.2.

7.8 Performance test on Unit #22. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a performance test on Unit #22 within 90 days of the issuance of this permit. The performance test shall determine the emission rate for particulate matter 10 microns in diameter or less. The owner or operator may conduct the performance test for total suspended particulate matter if the results of the test demonstrate compliance with the emission limit in permit condition 13.3.

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 limit in permit condition 6.1, except Unit #5, #6, #9, #11, and #12, on a periodic basis. Unit #5, #6, #9, #11, and #12 are subject to compliance assurance monitoring required in Chapter 15.0 of this permit. 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 condition 6.1 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 condition 6.1. 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 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 8.2, 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.

9.0 NSPS Subpart DD – Grain Elevators

9.1 Visibility standard for grain elevator – dryer. In accordance with ARSD 74:36:07:17, as referenced to 40 CFR §60.302(a), the owner or operator shall not discharge into the atmosphere any gases which exhibit greater than 0 percent opacity from the structure surrounding Unit #3.

9.2 Standard for grain elevator operations. In accordance with 74:36:07:17, as referenced to 40 CFR §60.302(b), the owner or operator shall not cause to be discharged into the atmosphere any gases from Unit #1, #2, and #4 in excess of the following:
1. Total suspended particulate matter greater than 0.01 grains per dry standard cubic foot; and
2. Opacity greater than 0 percent.

9.3  **Visibility standard for grain elevator – fugitive sources.** In accordance with 74:36:07:17, as referenced to 40 CFR §60.302(c), the owner or operator shall not cause to be discharged into the atmosphere from the following fugitive dust sources in excess of the associated visibility limit:

1. The truck unloading stations or railcar unloading station that exhibits greater than 5 percent opacity;
2. The truck loading station associated with the soybean reclaim conveyor that exhibits greater than 10 percent opacity; and
3. Any grain handling operation that exhibits greater than 0 percent opacity.

9.4  **Grain elevator performance test methods.** In accordance with 74:36:07:17, as referenced to 40 CFR §60.303(a), (b), and (c), if a performance test is requested, the owner or operator shall determine compliance with the total suspended particulate matter and opacity standards as follows:

1. The total suspended particulate matter concentration and volumetric flow rate of the effluent gas shall be determined by 40 CFR Part 60, Appendix A, Method 5 or Method 17. The sampling time and sample volume for each run shall be at least 60 minutes and 60 dry standard cubic feet. The probe and filter holder shall be operated without heaters;
2. The ventilation volumetric flow rate shall be determined by 40 CFR Part 60, Appendix A, Method 2; and

10.0  **NSPS Subpart Dc - Boilers**

10.1  **Changing boiler fuels.** In accordance with ARSD 74:36:07:05, as referenced to 40 CFR §60.40c, Unit #15 (EP #20a and #20b) shall be fueled only with natural gas, biodiesel and distillate oil. If the boilers are to be fueled with other fuels such as coal, residual oil, or wood, additional standards and requirements in 40 CFR Part 60, Subpart Dc may apply. The owner or operator shall apply for and obtain approval from the Secretary before other fuels can be used as a fuel in Unit #15.

Distillate oil means fuel oil that complies with the specifications for fuel oil numbers 1 or 2. Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6. Specifications for fuel oils are defined in the American Society for Testing and Materials in ASTM D396-78, "Standards Specifications for Fuel Oils".
10.2 **Visibility standard for boilers.** In accordance with ARSD 74:36:07:05, as referenced to 40 CFR §60.43c(c) and (d), no owner or operator of Unit #15 shall cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity based on a 6-minute average. The owner or operator is allowed an exception for one 6-minute period per hour of not more than 27 percent opacity while burning distillate oil. The visibility limit applies at all times except during periods of startup, shutdown, or malfunctions.

10.3 **Boiler performance test methods.** In accordance with 74:36:07:05, as referenced to 40 CFR §§60.43c(c) and 60.45c(a), if a performance test is requested, the owner or operator shall determine compliance with the opacity limit in permit condition 10.2 by 40 CFR Part 60, Appendix A, Method 9.

11.0 **MACT Subpart Q – Cooling Tower**

11.1 **Restriction on water treatment chemicals for cooling tower.** In accordance with ARSD 74:36:08:11, as referenced to 40 CFR §§63.402 and 63.404(b), no owner or operator shall use chromium based water treatment chemicals in an industrial process cooling tower. A cooling water sample residual hexavalent chromium concentration in excess of 0.5 parts per million by weight shall be considered a violation.

12.0 **MACT Subpart GGGG – Solvent Extraction for Vegetable Oil Production**

12.1 **Solvent extraction for vegetable oil production - Compliance demonstration plan.** In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2851(a) and (b), the owner or operator shall develop a written plan for demonstrating compliance that provides the detailed procedures the owner or operator will follow to monitor and record data necessary for demonstrating compliance with this Chapter. The plan shall include the following:

1. The name and address of the owner or operator;
2. The physical address of the solvent extraction for vegetable oil production process;
3. A detailed description of all methods of measurement used to determine the solvent losses, hazardous air pollutant content of solvent, and the tons of each type of oilseed processed. The detailed description shall include, but is not limited to:
   a. The operating status of the facility (i.e. normal operating period, non-operating period, and malfunction period);
   b. The dates that define each operating status during a calendar month;
   c. Record the beginning and ending inventory of solvent and oilseeds during a normal operating period;
   d. Record the gallons of solvent and tons of oilseeds received;
e. Adjustments to the solvent and oil seed records as long as a reasonable justification is provided such as changes in solvent working capacity, sold prior to being used, spoiled or moldy oilseeds, etc.; and
f. The date and time each measurement will be made;

4. Examples of each calculation used to determine compliance. The examples must include how data measured with one parameter will be converted to other terms used in the compliance determination;
5. Example logs of how data will be recorded; and
6. A plan to ensure that the data continue to meet compliance demonstration needs.

The owner or operator shall make revisions to the compliance demonstration plan, if it is determined that the plan’s procedures lack detail and/or those areas that are inconsistent or do not accurately determine the solvent loss, hazardous air pollutant content of the solvent, or the tons of oilseed processed. If the plan is revised, the previous versions must be maintained for at least five years.

12.2 Solvent extraction for vegetable oil production – Startup, shutdown, and malfunction plan. In accordance with ARSD 74:36:08:03, as referenced to 40 CFR §63.6(e)(3)(i), (vi), (vii), (viii), and (ix) and ARSD 74:36:08:28, as referenced to 40 CFR §63.2852, the owner or operator shall develop a written solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan that describes in detail the procedures for operating and maintaining the solvent extraction for vegetable oil production facility during periods of startup, shutdown, and malfunctions. In addition, the plan shall identify a program of corrective action for a malfunction of the process, air pollution control, and monitoring equipment used to comply with the relevant standard. The solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan does not need to address any scenario that would not cause an exceedance of an applicable emission limit. The solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan shall:

1. Ensure that at all times the owner or operator operates and maintains the solvent extraction for vegetable oil production facility, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions in permit condition 12.3;
2. Ensure that the owner or operator is prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and
3. Reduce the reporting burden associated with periods of startup, shutdown, and malfunction, including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation.

To satisfy this requirement, the owner or operator may use its standard operating procedures manual, an Occupational Safety and Health Administration (OSHA) plan, or another plan, provided the alternative plans meet all the requirements of this permit condition and are made available for inspection or submitted when requested by the Secretary.
The owner or operator shall make revisions within 45 days to the solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan, if it is determined that the plan does not address a startup, shutdown, or malfunction event that has occurred; fails to provide for the operation of a unit (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions; or does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable. Revisions to the solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan are not considered a permit revision.

12.3 Solvent extraction for vegetable oil production – Operation and maintenance requirements. In accordance with ARSD 74:36:08:03, as referenced to 40 CFR §63.6(e)(1)(i) and ARSD 74:36:08:28, as referenced to 40 CFR §63.2870, the owner or operator shall operate and maintain the solvent extraction for vegetable oil production facility, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions at all time, including periods of startup, shutdown, and malfunction. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator to reduce emissions to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Secretary which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan), review of operation and maintenance records, and inspection of the source.

12.4 Solvent extraction for vegetable oil production – Startup, shutdown, and malfunction records. In accordance with ARSD 74:36:08:03, as referenced to 40 CFR §63.6(e)(3)(iii) and (v) and ARSD 74:36:08:28, as referenced to 40 CFR §63.2852, the owner or operator must maintain a copy of the current solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan at the site and must make the plan available upon request for inspection and copying by the Secretary. In addition, if the solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan is subsequently revised, the owner or operator must maintain at the site each previous (i.e., superseded) version of the solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan, and must make each previous version available for inspection and copying by the Secretary for a period of five years after revision of the plan. If at any time after adoption of a solvent extraction for vegetable oil production Startup, Shutdown, and Malfunction plan the owner or operator ceases operation or is otherwise no longer subject to this permit condition, the owner or operator must retain a copy of the most recent plan for five years from the date the owner or operator ceases operation or is no longer subject to this permit condition and must make the plan available upon request for inspection and copying by the Secretary.
The owner or operator must keep the following records when an exceedance of an emission limit in Chapter 12.0 occurs during startup, shutdown, or malfunction:

1. The occurrence and duration of each startup or shutdown;
2. The occurrence and duration of each malfunction of operation (e.g., process equipment), the required air pollution control, or the monitoring equipment;
3. Actions taken during periods of startup or shutdown when the actions taken are different from the procedures specified in the Startup, Shutdown, and Malfunction plan;
4. Actions taken during periods of a malfunction when the actions taken are different from the procedures specified in the Startup, Shutdown, and Malfunction plan; and
5. All information necessary, including actions taken, to demonstrate conformance with the Startup, Shutdown, and Malfunction plan;

**12.5 Solvent extraction for vegetable oil production – Exceedance reporting.** In accordance with ARSD 74:36:08:03, as referenced to 40 CFR §63.6(e)(3)(iv) and ARSD 74:36:08:28, as referenced to 40 CFR §§63.2852 and 63.2861(d), if an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the startup, shutdown, and malfunction plan, and the owner or operator exceed any applicable emission limit in Chapter 12.0, the owner or operator must report such actions by telephone call or facsimile within two working days after commencing actions inconsistent with the plan, followed by a letter, delivered or postmarked, within seven working days after the end of the event. The startup, shutdown and malfunction report shall include:

1. The name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy;
2. An explanation of the circumstances of the event;
3. The reasons for not following the Startup, Shutdown, and Malfunction plan;
4. A description and date of the startup, shutdown, or malfunction event, its duration, and the reason its qualifies as a startup, shutdown, or malfunction event; and
5. An estimate of the solvent loss for the duration of the startup, shutdown, or malfunction event with supporting documentation

**12.6 Solvent extraction for vegetable oil production – Monthly reporting.** In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2861(c), if an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is consistent with the procedures specified in the startup, shutdown, and malfunction plan, and the owner or operator exceed any applicable emission limit in Chapter 12.0, the owner or operator must report the startup, shutdown, malfunction by the end of the following month after the month in which the startup, shutdown, malfunction event occurred. The startup, shutdown and malfunction report shall include:

1. The name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy;
2. A statement that the actions taken were consistent with the startup, shutdown, or malfunction event;
3. A description and date of the startup, shutdown, or malfunction event, its duration, and the reason it qualifies as a startup, shutdown, or malfunction event; and
4. An estimate of the solvent loss for the duration of the startup, shutdown, or malfunction event with supporting documentation.

12.7 Solvent extraction for vegetable oil production – Emission requirements. In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.28540, the owner or operator shall limit the number of gallons of hazardous air pollutants lost per ton of listed oilseeds as follows:

1. Maintain the compliance ratio to less than or equal to 1.00;
2. For each operating month, calculate a compliance ratio which compares the actual hazardous air pollutant loss to the allowed hazardous air pollutant loss for the previous 12 operating months. Equation 12-1 shall be used to determine the compliance ratio;

\[ \text{Compliance Ratio} = \left( \frac{f \times (\text{Actual solvent loss})}{(0.64) \times \left( \sum_{i=1}^{n} (\text{oilseed}_i \times SLF_i) \right)} \right) \]

where:
- \( f \) = the weighted average volume fraction determined from Equation 12-5;
- 0.64 = the average volume fraction in the baseline data;
- Actual solvent loss = gallons of actual solvent loss determined from Equation 12-3;
- Oilseed = tons of each oilseed type determined from Equation 12-7; and
- SLF = solvent loss factor (gallons per ton) for the oil seed. For an existing soybean plant, “SLF” = 0.2 gallons per ton.

3. When using Equation 12-7, the following conditions and exclusions may apply:
   a. If the source is not operating under a malfunction period, the month shall be considered a non-operating month;
   b. The 12-month compliance ratio may include months prior to and after a shutdown period;
   c. If the sources does not operate during the month, the month is considered a non-operating month. Exclude all non-operating months from the compliance ratio determination; and
   d. Exclude from the compliance ratio determinations any solvent and/or oilseed information recorded during a malfunction period.
4. The owner or operator may change the compliance option noted above to a Low hazardous air pollutant solvent option by submitting a notice to the Secretary at least 60 days prior to changing the compliance option.

12.8 Solvent extraction for vegetable oil production – Actual solvent lost. In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2853, the owner or operator shall determine the total gallons of solvent lost for a previous month by the end of the subsequent
calendar month. The 12-operating month rolling sum of gallons of solvent lost shall be determined as follows:

1. Determine the total gallons of solvent lost as described in your compliance demonstration plan in permit condition 12.1;
2. Determine the total gallons of solvent lost at your affected source during normal operating periods recorded within a calendar month. Equation 12-2 shall be used to determine the quantity of oilseeds processed;

**Equation 12-2 – Calculating quantity of oilseeds processed**

\[
\text{Monthly Solvent} = \sum_{n=1}^{6} (SOLV_B - SOLV_E) + (SOLV_R) \pm (SOLV_A)
\]

where:
- \(SOLV_B\) = Gallons of solvent in the inventory at the beginning of normal operating period;
- \(SOLV_E\) = Gallons of solvent in the inventory at the end of normal operating period;
- \(SOLV_R\) = Gallons of solvent received during normal operating period;
- \(SOLV_A\) = Gallons of solvent added or removed from the extraction solvent inventory during normal operating period; and
- \(n\) = Number of normal operating periods in the calendar month during which this solvent was processed.

3. Determine the total gallons of solvent lost during normal operating periods in the previous 12 operating months. The total gallons of solvent does not include the solvent used during a non-operating period or a malfunction. If the non-operating period or malfunction lasts the entire calendar month, the calendar month is considered a non-operating month. Equation 12-3 shall be used to determine the 12 operating month total gallons of solvent.

**Equation 12-3 – Determining 12 operating month total gallons of solvent**

\[
12\text{ month solvent} = (\text{solvent month}1) + (\text{solvent month}2) + \ldots + (\text{solvent month}12)
\]

where:
- \(\text{solvent month}1\) = Total gallons of solvent used during month 1;
- \(\text{solvent month}2\) = Total gallons of solvent used during month 2; and
- \(\ldots\text{solvent month}12\) = Total gallons of solvent used during months 3 through 12 summed together.

12.9 **Solvent extraction for vegetable oil production – Weighted average HAP fraction in solvent.** In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2854, the owner or operator shall determine a weighted average fraction of hazardous air pollutants in the solvent used for a previous month by the end of the subsequent calendar month. The 12-operating month weighted average fraction shall be determined as follows:

1. Record the volume fraction of each hazardous air pollutant comprising more than 1 percent by volume of the solvent in each delivery of solvent, including solvent recovered from off-site oil. To determine the hazardous air pollutant content of the material in each delivery of
solvent, the owner or operator may use 40 CFR Part 63, Appendix A, Method 311, an approved alternative method, or any other reasonable means, which includes but is not limited to, a material safety data sheet or a manufacturer's certificate of analysis;

2. Determine the weighted average volume fraction of hazardous air pollutant in the extraction solvent each operating month. The weighted average volume fraction of hazardous air pollutant for an operating month includes all solvent received since the end of the last operating month, regardless of the operating status at the time of the delivery. Equation 12-4 shall be used to determine the monthly weighted average volume fraction of hazardous air pollutants

\[
\text{Monthly Weighted Average} = \frac{\sum_{i=1}^{n} (\text{received}_i \times \text{content}_i)}{\text{total received}}
\]

where:
- \( n \) = the number of different solvents received with different characteristics;
- \( \text{received}_i \) = gallons of solvent received;
- \( \text{content}_i \) = volume fraction of hazardous air pollutant in solvent received; and
- \( \text{total received} \) = total gallons of solvent received in the month.

3. Determine the weighted average volume fraction of hazardous air pollutants in the extraction solvent over the last 12 operating months. Equation 12-5 shall be used to determine the 12 operating month weighted average volume fraction of hazardous air pollutants

\[
\text{12 Month Weighted Average} = \frac{\sum_{i=1}^{12} (\text{received}_i \times \text{content}_i)}{\text{total received}}
\]

where:
- \( 12 \) = the last 12 operating months, which includes the month the compliance ratio is being calculated;
- \( \text{received}_i \) = the gallons of solvent received in the operating month;
- \( \text{content}_i \) = the average monthly weighted fraction of hazardous air pollutants determined in Equation 12-4; and
- \( \text{total received} \) = total gallons of solvent received in the last 12 operating months.

12.10 **Solvent extraction for vegetable oil production – Quantity of oilseed processed.** In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2855, the owner or operator shall determine the tons of oilseeds received for a previous month by the end of the subsequent calendar month. The 12-operating month rolling sum of tons of oilseeds shall be determined as follows:
1. Determine the tons of oilseeds received as described in your compliance demonstration plan in permit condition 12.1;
2. Determine the quantity of each oilseed type processed at your affected source during normal operating periods recorded within a calendar month. Equation 12-6 shall be used to determine the quantity of oilseeds processed; and

\[
\text{Equation 12-6 – Calculating quantity of oilseeds processed}
\]

\[
\text{Monthly oil seed} = \sum_{n=1}^{n} (\text{Seed}_B) - (\text{Seed}_E) + (\text{Seed}_R) \pm (\text{Seed}_A)
\]

where:
- \(\text{Seed}_B\) = Tons of oilseed in the inventory at the beginning of normal operating period;
- \(\text{Seed}_E\) = Tons of oilseed in the inventory at the end of normal operating period;
- \(\text{Seed}_R\) = Tons of oilseed received during normal operating period;
- \(\text{Seed}_A\) = Tons of oilseed added or removed from the oilseed inventory during normal operating period; and
- \(n\) = Number of normal operating periods in the calendar month during which this type oilseed was processed.

3. Determine the quantity of each oilseed processed during normal operating periods in the previous 12 operating months. The quantity of oil seed does not include oil seeds processed during a non-operating period or a malfunction. If the non-operating period or malfunction lasts the entire calendar month, the calendar month is considered a non-operating month. Equation 12-7 shall be used to determine the 12 operating month oilseed total

\[
\text{Equation 12-7 – Calculating 12 operating month oilseed total}
\]

\[
\text{12 month oilseed} = (\text{Oilseed month1}) + (\text{Oilseed month2}) + \ldots (\text{Oilseed month12})
\]

where:
- \(\text{Oilseed month1}\) = Tons of oilseed processed during month 1;
- \(\text{Oilseed month2}\) = Tons of oilseed processed during month 2; and
- \(\ldots\text{Oilseed month12}\) = Tons of oilseed processed during months 3 through 12 summed together.

12.11 Solvent extraction for vegetable oil production – Other records. In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2862, the owner or operator shall maintain the following records:

1. A copy of the compliance demonstration plan in permit condition 12.1
2. A copy of the startup, shutdown, and malfunction plan in permit condition 12.2
3. A copy of the data used to develop the amount of solvent lost as described in permit condition 12.8;
4. A copy of the data used to develop the weighted average volume fraction of hazardous air pollutants as described in permit condition 12.9;
5. A copy of the data used to develop the amount of oilseeds processed as described in permit condition 12.10;
6. A copy of the compliance ratio calculations as described in permit condition 12.7;
7. A copy of the reports as described in permit conditions 12.5, 12.6, 12.12, and 12.13; and
8. A copy of the data for each startup, shutdown, and malfunction as described in permit condition 12.4

12.12 Solvent extraction for vegetable oil production – Annual report. In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2861(a), the owner or operator shall submit an annual report with the following information:

1. Name and address of the owner or operator;
2. The physical address of the facility
3. The types of oilseed processed during the calendar year
4. Each hazardous air pollutant identified in permit condition 12.9;
5. A statement designating the facility is still a major source or a demonstration that the facility qualifies as an area source;
6. A statement certifying that the procedures in the compliance demonstration plan in permit condition 12.1 was followed;
7. A statement certifying that the compliance ratio determined in accordance with permit condition 12.7

The annual report shall cover the calendar prior to year the report is submitted. This report may be submitted with the annual compliance certification in permit condition 5.5, which is due March 1 of each year.

12.13 Solvent extraction for vegetable oil production – Monthly deviation report. In accordance with ARSD 74:36:08:28, as referenced to 40 CFR §63.2861(b), the owner or operator shall submit a monthly deviation report if the compliance ratio of 1.00 is exceeded during a month while operating in normal operations. The monthly deviation report shall contain the following:

1. Name and address of the owner or operator;
2. The physical address of the facility
3. The types of oilseed processed during the calendar year
4. The compliance ratio identifying the deviation

The monthly report shall be submitted by the end of the subsequent month after the month in which the deviation occurred.
13.0 PSD Exemptions

13.1 Sulfur content limit for Unit #15. In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not burn distillate oil or biodiesel oil with a sulfur content greater than 0.05 percent sulfur by weight in the two boilers associated with Unit #15.

13.2 Fuel limit. In accordance with ARSD 74:36:05:16.01(8), the amount of natural gas, distillate oil and biodiesel shall be limited based on use that maintains the owner or operator’s nitrogen oxide emissions less than 38 tons per 12-month period from Unit #3 and #15. The monthly nitrogen oxide emissions shall be calculated using Equation 13-1.

Equation 13-1 – Monthly nitrogen oxide emissions

\[ E_m = E_b + E_d \]

Where:
- \( E_m \) = Monthly nitrogen oxide emissions, in tons;
- \( E_b \) = Monthly nitrogen oxide emissions from the boilers, in tons; and
- \( E_d \) = Monthly nitrogen oxide emissions from the dryer, in tons.

The monthly nitrogen oxide emissions from the boiler shall be calculated using Equation 13-2.

Equation 13-2 – Monthly boiler nitrogen oxide emissions

\[ E_b = \frac{[NG_u \times NG_{ef} ] + [DO_u \times DO_{ef} ] + [BD_u \times BD_{ef} ]}{2000} \]

Where:
- \( E_b \) = Monthly nitrogen oxide emissions, in tons;
- \( NG_u \) = Monthly natural gas usage, in million cubic feet;
- \( NG_{ef} \) = Natural gas emission factor, in pounds per million cubic feet;
- \( DO_u \) = Monthly distillate oil usage, in gallons;
- \( DO_{ef} \) = Distillate oil emission factor, in pounds per gallon;
- \( BD_u \) = Monthly biodiesel usage, in gallons; and
- \( BD_{ef} \) = Biodiesel emission factor, in pounds per gallon.

The monthly nitrogen oxide emissions from the dryer shall be calculated using Equation 13-3.

Equation 13-3 – Monthly dryer nitrogen oxide emissions

\[ E_d = \frac{NG_u \times NG_{ef}}{2000} \]

Where:
- \( E_d \) = Monthly nitrogen oxide emissions, in tons;
- \( NG_u \) = Monthly natural gas usage, in million cubic feet; and
• $NG_{ef} = $ Natural gas emission factor, in pounds per million cubic feet.

Compliance with the limit shall be determined on a 12-month rolling total. The nitrogen oxide emission factors shall be based on the most recent performance test conducted in accordance with Chapter 7.0 of this permit.

13.3 **Unit #22 particulate matter limit.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator shall not allow the emissions of particulate matter 10 microns in diameter or less (PM10) from Unit #22 in excess of 0.01 grains per dry standard cubic foot. Compliance with the emission limit shall be based on the average of three one hour test runs.

13.4 **Monitoring sulfur content of distillate oil and biodiesel.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall obtain a fuel supplier certification for each load of distillate oil and biodiesel purchased or received. The fuel supplier certification shall include the following information:

1. The name of the fuel supplier;
2. A statement from the fuel 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. Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6. 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 0.05 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 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. A copy of the results of the distillate oil and/or biodiesel analysis shall be submitted with the report required in permit condition 13.7.

13.5 **Monthly production records for PSD exemptions.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall calculate the following each month:

1. Total amount of natural gas, in million cubic feet; distillate oil, in gallons; and biodiesel, in gallons fired in Unit #3, the two boilers associated with Unit #15, and from insignificant activities such as the fire pump engine and emergency generator; and
2. A 12-month rolling total of the nitrogen oxide emissions using that month’s value and the previous 11 months’ values from Unit #3, the two boilers associated with Unit #15, and from insignificant activities such as the fire pump engine and emergency generator.
13.6 **Semiannual PSD exemption report.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a semiannual report to the Secretary by the end of each calendar half. The semiannual report shall contain the following information:

1. Name of the facility, permit number, reference to this permit condition, identify the submittal as a semiannual PSD exemption report, and calendar dates covered in the reporting period;
2. The amount of nitrogen oxide emitted during each month and each 12-month rolling total in the reporting period for Unit #3, the two boilers associated with Unit #15, and from insignificant activities such as the fire pump engine and emergency generator; and
3. A copy of the results of any distillate oil and/or biodiesel analysis required in permit condition 13.5 and conducted during the reporting period.

The semiannual reports must be postmarked no later than 30 days after the end of the reporting period (i.e. January 30th and July 30th).

13.7 **Exempt from PSD review.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator is exempt from a prevention of significant deterioration review for sulfur dioxide and nitrogen oxide emissions. The exemption is due to operational limits in Chapter 13.0 of this permit. Any relaxation in the operational limits that increases the sulfur dioxide or nitrogen oxide emissions equal to or greater than 38 tons per 12-month period will require a full prevention of significant deterioration review for that pollutant as though construction had not commenced.

13.8 **Unit #22 exempt from PSD review.** In accordance with ARSD 74:36:05:16.01(8), the owner or operator is exempt from a prevention of significant deterioration review for Unit #22. The exemption is due to operational limits in Chapter 13.0 of this permit. Any relaxation in the operational limits that increases particulate matter (10 microns in diameter or less) emissions from Unit #22 equal to or greater than 14.3 tons per 12-month period will require a full prevention of significant deterioration review as though construction had not commenced.

14.0 **PSD – BACT and Other Requirements**

14.1 **BACT limit for hexane solvent loss.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR §52.21, the total amount of hexane solvent lost to the ambient air shall not exceed 0.30 gallons of solvent per ton of soybeans processed. Compliance with this limit shall be determined on a 12-month rolling average.

14.2 **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.
<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>PM10 Emission Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>EP-#1 – Truck and railcar soybean receiving system.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#2</td>
<td>EP-#2 – Soybean handling, storage, and cleaning process.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#4</td>
<td>EP-#4 – Soybean screened and cleaned with aspiration.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#5</td>
<td>EP-#5 – Soybean cracking process.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#6</td>
<td>EP-#6 – Primary soybean de-huller operation.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#18</td>
<td>EP-#7 – Coarse soybean de-huller operation.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#47</td>
<td>EP-#8 – Fines soybean de-huller operation.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#8</td>
<td>EP-#9 – Eight 1995 Roskamp Champion flakers.</td>
<td>2.3 pounds per hour (filterable)</td>
</tr>
<tr>
<td>#14a</td>
<td>EP-#12 – Desolventizer, toaster, dryer, and cooler system.</td>
<td>1.4 pounds per hour (filterable)</td>
</tr>
<tr>
<td>#14b</td>
<td></td>
<td>2.3 pounds per hour (filterable)</td>
</tr>
<tr>
<td>#14c</td>
<td></td>
<td>2.3 pounds per hour (filterable)</td>
</tr>
<tr>
<td>#14d</td>
<td></td>
<td>2.3 pounds per hour (filterable)</td>
</tr>
<tr>
<td>#9</td>
<td>EP-#13 – 1995 Roskamp Champion meal sizing process.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#12</td>
<td>EP-#14 – Meal handling and storage.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#10</td>
<td>EP-#15 – Two hull grinders.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#13a</td>
<td>EP-#17 – Pneumatic transfer.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#13b</td>
<td>EP-#17 – Pneumatic transfer.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#11</td>
<td>EP-#18 – Meal and hull load out.</td>
<td>0.01 grains per dry standard cubic foot (filterable)</td>
</tr>
<tr>
<td>#15</td>
<td>EP-#20a – Boiler A, 1996 Nebraska boiler fueled with natural gas and distillate oil.</td>
<td>Good design</td>
</tr>
<tr>
<td>#15b</td>
<td>EP-#20b – Boiler B, 1996 Nebraska boiler fueled with natural gas and distillate oil.</td>
<td>Good design</td>
</tr>
</tbody>
</table>

1 – Compliance with the emission limit is based on the average of three test runs; and
2 – Compliance with the emission limit is based on a review of the design criteria in the permit application.
14.3 **BACT limits for volatile organic compounds.** 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 in excess of the emission specified limits in Table 14-2 for the appropriate permitted units, operations, and processes.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Description</th>
<th>VOC Emission Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>#15</td>
<td>EP-#20a – Boiler A, 1996 Nebraska boiler fueled with natural gas and distillate oil.</td>
<td>Good Design&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>1</sup> – Compliance with the emission limit is based on a review of the design criteria in the permit application.

14.4 **Monthly production records for BACT limits.** In accordance with ARSD 74:36:09:02, as referenced to ARSD 74:36:05:16.01(9), the owner or operator shall calculate the following each month:

1. Total amount of hexane solvent that is released into the ambient air, in gallons;
2. Total amount of soybeans processed through the plant, in tons; and
3. A 12-month rolling total of the amount of hexane solvent lost, in gallons, per soybeans processed, in tons.

14.5 **Hexane solvent leak detection plan.** In accordance with ARSD 74:36:09:02, as referenced to 40 CFR §52.21, the owner or operator shall develop, implement, and maintain a hexane solvent leak detection plan. The hexane solvent leak detection plan shall contain an overall description of the hexane solvent leak detection plan, a time frame for conducting periodic leak checks, timeline for repairing leaks, and other pertinent information that demonstrates hexane solvent emissions caused by leaks will be minimized.

14.6 **Semiannual production report.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall submit a semiannual production report to the Secretary by the end of each calendar half. The semiannual report shall contain the following information:

1. Name of the facility, permit number, reference to this permit condition, identify the submittal as a semiannual production report, and calendar dates covered in the reporting period; and
2. The 12-month rolling average of the amount of hexane solvent lost, in gallons, per soybeans processed, in tons, for each month in the reporting period using that month’s value and the previous 11 months’ values.

The semiannual reports must be postmarked no later than 30 days after the end of the reporting period (i.e. January 30<sup>th</sup> and July 30<sup>th</sup>).
15.0 Compliance Assurance Monitoring

15.1 Compliance assurance monitoring for opacity limits. In accordance with ARSD 74:36:13:08, the owner or operator shall demonstrate compliance with the particulate matter and opacity limits in Chapter 6.0 and 14.0, for Unit #5, #6, #9, #11, and #12 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, 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 a particulate matter or opacity limit in Chapters 6.0 and 14.0 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 and 14.0. 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 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 8.2, 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.

15.2 **Compliance assurance monitoring log.** In accordance with ARSD 74:36:13:08, the owner or operator shall maintain a monitoring log for Unit #5, #6, #9, #11, and #12. The monitoring log shall contain the following information.

1. Maintenance schedule for each piece of control equipment listed in Table 1-1 for Unit #5, #6, #9, #11, and #12. At a minimum, the maintenance schedule shall meet the manufacturer’s recommended schedule for maintenance. The following information shall 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;
   e. Signature of person performing maintenance;

2. The following information shall be recorded for each visible emission reading required in permit condition 15.1:
   d. Identify the unit;
   e. The date and time the visible emission reading was performed;
   f. If visible emissions were observed;
   g. Description of maintenance performed to eliminate visible emissions;
   h. Visible emission evaluation if visible emissions are not eliminated; and
   i. Signature of person performing visible emission reading and/or visible emission evaluation; and

3. 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.