Permit #: 28.2269-02

Effective Date: April 3, 2015

Expiration Date: June 7, 2018

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

A. Owner

1. Company Name and Address

South Dakota School of Mines and Technology
501 East St. Joseph Street
Rapid City, SD 57701

2. Actual Source Location and Mailing Address if Different from Above

Same as above

3. Permit Contact

Jerilyn Roberts, Director of Facilities and Risk Management
605-394-6729

4. Facility Contact

Same as above

5. Responsible Official

Frank S. Malott, VP for Finance and Administration

B. Permit Revisions or Modifications

- March 5, 2014 – Administrative Amendment to change the permit contact and the responsible official
- September 3, 2014 – Administrative Amendment to change the responsible official
- September 22, 2014 – Administrative Amendment to change the permit contact and facility contact
- April 3, 2015 – Modification to add an existing emergency generator to Title V operating permit.

C. Type of Operation

Higher education 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 received May 24, 2012, March 5, 2014, September 3, 2014, September 22, 2014 and November 6, 2014, unless modified by the conditions of this permit. Except as otherwise provided herein, the control equipment shall be operated at all times in accordance with the manufacturer's specification and in a manner that achieves compliance with the conditions of this permit. The application consists of the application forms, supporting data, and supplementary correspondence. If the owner or operator becomes aware 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

Unit	Description	Maximum Operating Rate	Control Device
#1	Boiler #1, 2006, Superior, W7-X-2500, natural gas and distillate fired boiler in Physical Plant	20.9 million Btus per hour heat input	Not applicable
#2	Boiler #2, 1972, Kewanee, L2S750, natural gas and distillate fired boiler in Physical Plant	25.1 million Btus per hour heat input	Not applicable
#3	Emergency Generator #1, 2004, Caterpillar, 3306B, distillate fired generator in Physical Plant	260 horsepower heat output	Not applicable
#4	Emergency Generator #2, 2009, Caterpillar, C15 ATAAC, distillate fired generator in Physical Plant	619 horsepower heat output	Not applicable
#5	Emergency Generator #3, Cummins, model GGHJ-1324433 fired with natural gas at ITS UPS	194 horsepower heat output	Not applicable

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 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, upon presentation of credentials, 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 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 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 in violation of this permit. Credible evidence may consist of the following:

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred:
   a. A monitoring method approved 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 paragraph (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 Amendments and Modifications

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 cannot be implemented until the Secretary takes final action on the proposed change or the owner or operator was issued an air quality construction permit. 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 the proposed change is an administrative permit amendment. As provided in ARSD 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;
3. Requires more frequent monitoring or reporting;
4. The ownership or operational control changes and the Secretary determines 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 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 the proposed change is a permit modification. As provided in ARSD 74:36:05:35, 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 recordkeeping 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 recordkeeping 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 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. In accordance with ARSD 74:36:05:41, the Secretary shall notify the owner or operator at least 30 days before reopening this permit. The 30-day period may be less in the case of an emergency.

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 describing 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 resulting 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 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

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 to operate 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 Recordkeeping and Reporting

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. 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; and
   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 and if it operates on a monthly, quarterly, semiannual, or annual basis;
   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; and
3. 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 the permitted equipment was at the time being properly operated.

5.5 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 natural gas in cubic feet that was burned in the boilers;
2. The amount of distillate oil in gallons that was burned in the boilers;
3. The amount of distillate oil in gallons that was burned in the generators; and
4. The amount of natural gas in cubic feet that was burned in the generator.

5.6 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, recordkeeping, 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.

5.7 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) 773-4068.

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. A description of the permit violation and its cause(s);
2. The duration of the permit violation, including exact dates and times; and
3. The 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, unless otherwise specified in this permit. 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 opacity 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 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), 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 6-1 – Total Suspended Particulate Matter Emission Limit

Unit	Description	Emission Limit
#1	Boiler #1	0.5 pounds per million Btus
#2	Boiler #2	0.5 pounds per million Btus
#3	Emergency Generator #1	0.6 pounds per million Btus
#5	Emergency Generator #3	0.6 pounds per million Btus

6.4 Sulfur dioxide limits

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

Table 6-2 – Sulfur Dioxide Emission Limit

Unit	Description	Emission Limit
#1	Boiler #1 while firing natural gas	3.0 pounds per million Btu heat input
#2	Boiler #2	3.0 pounds per million Btu heat input
#5	Emergency Generator #3	3.0 pounds per million Btu heat input

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

6.5 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 owner or operator, 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

6.6 Circumvention not allowed

In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.12, 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.

In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.4(b), no owner or operator shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere.

6.7 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

In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.6(e)(1)(i), the owner or operator shall at all times, including periods of startup, shutdown, and malfunction, operate and maintain any permitted unit, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires the owner or operator to reduce emissions from the permitted unit 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 a startup, shutdown, and malfunction plan, if required), review of operation and maintenance records, and inspection of the operation.

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 outlining what needs to be completed for approval.

7.5 Notification of test

In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.8(d), the owner or operator shall notify the Secretary at least 30 days prior to the start of a performance test to afford the Secretary the opportunity to have an observer present. If there is a delay in conducting the scheduled performance test, the owner or operator shall notify the Secretary as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Secretary by mutual agreement.

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 represented in the same terminology as the permit limits;
5. Quality assurance procedures and results;
6. Records of operating conditions during the test necessary for demonstrating compliance with the permit limits, 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.

8.0 Monitoring

8.1 Periodic opacity monitoring for units operating on a monthly or more frequent basis

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall demonstrate compliance with the opacity limits in Chapter 6.0 on a periodic basis for the units identified in the monthly log required in permit condition 5.4 that operate on a monthly or more frequent basis. If the unit operates on natural gas, periodic monitoring is not required. Periodic monitoring for units that operate on a monthly or more frequent basis shall be based on the following steps:

Step 1: 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 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, periodic monitoring shall consist of a visible emission test to determine if the unit is in compliance with the opacity limit specified in Chapter 6.0. The visible emission test shall be for at least 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;
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 in Step 2(b) is less than five percent for three 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 Step 2(a) 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 four 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 reading does not have to be certified in accordance with 40 CFR Part 60, Appendix A, Method 9. 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 Monitoring opacity limits for units operating periodically

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall demonstrate compliance with the opacity limits in Chapter 6.0 for the units identified in the monthly log required in permit condition 5.4 that operate on a quarterly, semiannual, or annual basis. If the unit operates on natural gas, periodic monitoring is not required. Periodic monitoring shall be based on the following steps:

Step 1: For units that operate on a quarterly basis, monitoring shall consist of the following:

a. Monitoring shall consist of a visible emission reading once per quarter. A visible emission reading shall consist of a visual survey of the 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; or
b. If visible emissions are observed from a unit at any time other than periods of startup, shutdown, or malfunction, the owner or operator shall conduct a visible emission test on that unit to determine if the unit is in compliance with the opacity limit specified in Chapter 6.0. The visible emission test must be conducted within one hour of witnessing a visible emission from the unit. The visible emission test shall be for at least 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.

Step 2: For units that operate on a semiannual or annual basis, monitoring shall consist of the following:

a. Monitoring shall consist of a visible emission reading once per year. A visible emission reading shall consist of a visual survey of the 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;

b. If visible emissions are observed from a unit at any time other than periods of startup, shutdown, or malfunction, the owner or operator shall conduct a visible emission test on that unit to determine if the unit is in compliance with the opacity limit specified in Chapter 6.0. The visible emission test must be conducted within one hour of witnessing a visible emission from the unit. The visible emission test shall be for at least 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.

The person conducting the visible emission reading does not have to be certified in accordance with 40 CFR Part 60, Appendix A, Method 9. 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.

8.3 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 distillate oil

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 (diesel) purchased or received. The fuel supplier certification shall include the following information:

1. The name of the oil supplier;
2. A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil (diesel). Distillate oil (diesel) means fuel oil that complies with the specifications for fuel oil numbers 1 or 2. Residual oil means crude oil and is fuel oil that does not comply with the specifications under the definition of distillate oil and includes 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 oil does not exceed 0.5 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 storage tank within 30 days of receiving the shipment of distillate oil (diesel) but before another load is transferred into the storage tank. The grab sample shall be analyzed to determine the sulfur content of the distillate oil (diesel) in the storage tank. A copy of the results of the analysis shall be submitted with the annual compliance certification required in permit condition 5.6.

9.0 Boiler (Unit #1) NSPS Requirements

9.1 Sulfur limit for diesel

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.42c(d), (h)(1), and (i), on or after the date on which the initial performance test in permit condition 9.3 is completed, the owner or operator shall not combust diesel in Unit #1 that contains greater than 0.5 weight percent sulfur. Compliance with the diesel sulfur limit shall be determined based on a certification from the fuel supplier that includes the information identified in permit condition 9.4. The diesel sulfur limit applies at all times, including periods of startup, shutdown, and malfunctions.

9.2 Date of initial startup notification

In accordance with ARSD 74:36:07:01 and 74:36:07:05, as referenced to 40 CFR §§ 60.7(a) and 60.48c(a), the owner or operator shall submit a notification of the date of initial startup of Unit #1. The notification shall include:

1. Name of facility, permit number, and reference to this permit condition;
2. Identify the date of initial startup. Initial startup is defined as the first time fuel is combusted in Unit #1; and
3. The design heat input capacity of the boiler and identification of fuels to be combusted in the unit.

The initial startup notification must be postmarked within 15 days after the date of actual startup.

9.3 Initial fuel oil sulfur performance test

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.44c(h), the initial performance test for demonstrating compliance with the diesel sulfur limit shall consist of a certification from the fuel supplier, as described in permit condition 9.4. The certification shall be for the first load of diesel that will be combusted in Unit #1.

9.4 Diesel supplier certification

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(f)(1), the owner or operator shall obtain a fuel supplier certification for each load of diesel 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 the diesel complies with the specifications under the definition of distillate oil given in permit condition 9.8; and
3. A statement that the sulfur content of the diesel does not exceed 0.5 weight percent sulfur.

9.5 Natural gas supplier certification

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(f)(4), the owner or operator shall maintain the following natural gas fuel supplier information:

1. The name of the fuel supplier;
2. The potential sulfur emissions rate or maximum potential sulfur emissions rate of the natural gas in nanogram per Joules heat input; and
3. The method used to determine the potential sulfur emissions rate of the natural gas.

9.6 Recordkeeping requirements for boiler

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(g) and (i), the owner or operator shall maintain the following records:

1. Each fuel supplier certification;
2. A copy of the initial startup notification;
3. A copy of each semiannual report; and
4. Records of the amount of each fuel combusted during each calendar month; or
5. Records of the total amount of each fuel delivered to the property during each calendar month.

All records shall be maintained for a period of two years following the date of such record.

9.7 Semiannual reporting for boiler

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.48c(d), (e), and (j), the owner or operator shall submit a semiannual report to the Secretary. The semiannual reports shall contain the following information:

1. Name of facility, permit number, reference to this permit condition, identifying the submittal as a semiannual report, and the calendar dates covered in the reporting period;
2. Copies of the fuel supplier certification for each load of diesel purchased or received during the reporting period. If no diesel is purchased or received during the reporting period, a statement that no diesel was purchased or received shall be included;
3. A certified statement signed by the owner or operator that the records of fuel supplier certifications submitted represent all of the diesel combusted during the reporting period.

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

9.8 Changing boiler fuel

In accordance with ARSD 74:36:07:05, as referenced to 40 CFR § 60.40c, Unit #1 shall be fired with natural gas or diesel. If Unit #1 is fueled with other fuels such as coal, other 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 #1.

Distillate oil means diesel that complies with the specifications for fuel oil numbers 1 or 2. Residual oil means crude 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".

10.0 Emergency Generator (Unit #4) NSPS Requirements

10.1 Emergency generator (Unit #4) emission limits

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR §§ 60.4205(b), 60.4202(a)(2), and 60.4206, the owner or operator shall operate and maintain the emergency generator (Unit #4) that achieves the emission limits in Table I-1 over the entire life of the emergency generator.

Table I-1 – Emission limits for emergency generators

Non Methane Hydrocarbons and Nitrogen Oxide	Carbon Monoxide	Particulate Matter
4.0 grams per kilowatt-hour	3.5 grams per kilowatt-hour	0.20 grams per kilowatt-hour

10.2 Fuel requirements for emergency generator (Unit #4)

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4207(b), the owner or operator shall only combust diesel fuel in the emergency generator (Unit #4) that meets the following per gallon standards:

1. Maximum sulfur content of 15 parts per million; and
2. Minimum cetane index of 40; or
3. Maximum aromatic content of 35 volume percent.

10.3 Operating requirements for emergency generator (Unit #4)

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4211(a), the owner or operator shall comply with the following, except as specified in permit condition 10.6:

1. Operate and maintain the emergency generator according to the manufacturer's emission-related written instructions;
2. Change only those emission-related settings that are permitted by the manufacturer; and
3. Meet the applicable requirements in 40 CFR Part 89, 94, and/or 1068.

10.4 Compliance with emergency generator (Unit #4) emission limits

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4211(c), the owner or operator shall demonstrate compliance with the emission limits in permit condition 10.1 by purchasing an engine certified to meet the emission limits in permit condition 10.1. The engine must be installed and configured according to the manufacturer’s emission-related specifications, except as permitted in permit condition 10.6.

10.5 Annual operation of emergency generator (Unit #4)

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4211(f), the owner or operator may operate the emergency generator for the purpose of maintenance checks and readiness testing, provided the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency generator in emergency situations. The owner or operator may petition the Secretary for approval of additional hours to be used for maintenance checks and readiness

testing, but a petition is not required if the owner or operator maintains records indicating Federal, State, or local standards require maintenance and testing of emergency generators beyond 100 hours per year. Emergency generators may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

10.6 Alternative requirements for emergency generator (Unit #4)

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4211(g)(3), if the owner or operator does not install, configure, operate, and maintain the emergency generator according to the manufacturer's emission-related written instructions or changes the emission-related settings in a way that is not permitted by the manufacturer, the owner or operator must demonstrate compliance as follows:

1. Maintain a maintenance plan and records of conducted maintenance;
2. To the extent practicable, maintain and operate the generator in a manner consistent with good air pollution control practice for minimizing emissions;
3. Conduct an initial performance test to demonstrate compliance with the emission limits in permit condition 10.1 within 1 year of startup, within 1 year after the nonemergency generator is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after the owner or operator changes emission-related settings in a way that is not permitted by the manufacturer; and
4. Conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

10.7 Performance test requirements for emergency generator (Unit #4)

In accordance with ARSD 74:36:07:88, as referenced to 40 CFR § 60.4212(a), if the owner or operator conducts a performance test to demonstrate compliance with permit condition 10.1, the performance test must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F.

10.8 Non-resettable clock

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall install, maintain, and operate a non-resettable hour meter on the emergency generator (Unit #4) prior to initial startup.

11.0 MACT Subpart JJJJJJ for Boilers (Units #1 and #2)

11.1 Work practice standards

In accordance with 40 CFR § 63.11201(b), the owner or operator shall conduct the following work practice standards on Units #1 and #2:

1. The owner or operator shall conduct a biennial tune-up as specified in permit condition 11.4; and
2. The owner or operator shall conduct a one-time energy assessment performed by a qualified energy assessor in accordance with permit condition 11.5. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in permit condition 11.5 satisfies the energy assessment requirement.

11.2 Initial work practice standard compliance deadline

In accordance with 40 CFR § 63.11196(a), the owner or operator shall demonstrate initial compliance with permit condition 11.1 by the following dates:

1. An initial tune-up shall be conducted no later than March 21, 2012; and
2. The energy assessment shall be conducted no later than March 21, 2014.

11.3 Notice of compliance status

In accordance with 40 CFR §§ 63.11214(b) and (c) and 63.11225(a)(4), the owner or operator shall submit a Notification of Compliance Status to the Secretary within 120 days after the applicable work practice standard compliance deadline in permit condition 11.2. The Notification of Compliance Status shall contain the following:

1. The methods used to determine compliance;
2. The results of the initial tune-up and if requested by the Secretary, the results of the energy assessment;
3. A statement by the owner or operator as to whether the source has complied with the relevant standard or other requirements; and
4. A statement that the initial tune-up or energy assessment was conducted in accordance with permit condition 11.4 or 11.5, respectively.

The Notice of Compliance Status shall be signed by the responsible official.

11.4 Boiler tune-up requirements

In accordance with 40 CFR § 63.11223(a) and (b), the owner or operator shall conduct a tune-up of the boiler on a biennial basis. The biennial tune-up shall be conducted within 25 months from the date the previously conducted tune-up was completed. The tune-up shall meet the following requirements:

1. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The owner or operator may delay the burner inspection until the next scheduled shutdown, however, the burner must be inspected at least once every 36 months;

2. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
3. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly;
4. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available;
5. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made);
6. Maintain onsite and submit, if requested by the Secretary, a report containing the following information:
   a. The concentrations of carbon monoxide in parts per million, by volume, and oxygen in volume percent, measured before and after the tune-up of the boiler;
   b. A description of any corrective actions taken as a part of the tune-up of the boiler; and
   c. The type and amount of fuel used over the 12 months prior to the biennial tune-up of the boiler; and
7. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within one week of startup.

11.5 Boiler energy assessment requirements

In accordance with 40 CFR § 63.11201(b), the owner or operator shall conduct the one-time energy assessment according to the following requirements:

1. A visual inspection of the boiler system;
2. An evaluation of operating characteristics of the facility, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints;
3. Inventory of major systems consuming energy from affected boiler(s);
4. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage;
5. A list of major energy conservation measures;
6. A list of the energy savings potential of the energy conservation measures identified; and
7. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

11.6 Biennial compliance certification report

In accordance with 40 CFR § 63.11225(b), the owner or operator shall prepare a biennial compliance certification report by March 1 of the reporting year. The report shall contain the following information:

1. Facility name and address; and
2. Statement by a responsible official, with the official's name, title, phone number, e-mail address, and signature, certifying the truth, accuracy and completeness of the notification

and a statement of whether the source has complied with all the relevant standards and other requirements of Chapter 11.0; and

3. A copy of the biennial tune-up identifying the date of each boiler tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned.

11.7 Boiler recordkeeping requirements

In accordance with 40 CFR § 63.11225(c), the owner or operator shall maintain the following records for each boiler applicable to Chapter 11.0:

1. A copy of each notification of compliance report;
2. A copy of the energy assessment report; and
3. A copy of the biennial compliance certification report.

11.8 Changing boiler fuel

In accordance with 40 CFR § 63.11195(e), Units #1 and #2 shall be fueled only with natural gas and diesel. If Units #1 and #2 are fueled with other fuels such as coal or wood, additional standards and requirements in 40 CFR Part 63 Subpart JJJJJJ 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 the boilers.

12.0 MACT Subpart ZZZZ for Generators (Unit #3)

12.1 Date to comply with emergency generator (Unit #3) requirements

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6595(a)(1), the owner or operator shall comply with the applicable requirements specified in this chapter on and after May 3, 2013.

12.2 Maintenance requirements for emergency generator (Unit #3)

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6603(a), the owner or operator shall:

1. Change oil and oil filter every 500 hours of operation or annually, whichever comes first;
2. Inspect air cleaner every 1,000 hours or operation, or annually, whichever comes first; and
3. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

If an emergency generator engine is operating during an emergency and it is not possible to shut down the engine in order to perform the maintenance requirements on the schedule or if performing the maintenance requirements on the required schedule would otherwise pose an unacceptable risk under Federal, State, or local law, the maintenance requirements can be delayed until the emergency is over or the unacceptable risk under Federal, State, or local law has abated. The maintenance requirements should be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated. The

owner or operator must report any failure to perform the maintenance requirements on the schedule required and the Federal, State or local law under which the risk was deemed unacceptable.

12.3 Minimizing emissions from emergency generator (Unit #3)

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6605, the owner or operator shall be in compliance with the requirements in this chapter at all times. The owner or operator shall at all times operate and maintain the emergency generator engine, including associated monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if the requirements in this chapter have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on available information which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the emergency generator engine.

12.4 Operate emergency generator (Unit #3) according to manufacturer's instructions

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR §§ 63.6625(e) and 63.6640(a), the owner or operator shall operate and maintain the emergency generator engine according to the manufacturer's emission-related written instructions or develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the emergency generator engine in a manner consistent with good air pollution control practice for minimizing emissions.

12.5 Installation and operation of a non-resettable hour meter

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR §§ 63.6625(f) and 63.6635(a) and (b), the owner or operator shall install, operate, and maintain a non-resettable hour meter on the emergency generator engine. Except for a non-resettable hour meter malfunction and associated repairs, the non-resettable hour meter must monitor the operation of the emergency generator engine continuously at all times the engine is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the non-resettable hour meter. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

12.6 Minimizing startup time

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6625(h), the owner or operator shall minimize the emergency generator engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes.

12.7 Alternative maintenance schedule

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6625(i), the owner or operator may utilize an oil analysis program in order to extend the specified oil change requirement in permit condition 12.2. The oil analysis must be performed at the same frequency specified for changing the oil in permit condition 12.2. The analysis program must at a minimum

analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows:

1. Total Base Number is less than 30 percent of the Total Base Number of the oil when new;
2. Viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or
3. Percent water content (by volume) is greater than 0.5.

If all of these condemning limits are not exceeded, the owner or operator is not required to change the emergency generator engine oil. If any of the limits are exceeded, the owner or operator must change the engine oil within 2 days of receiving the results of the analysis. If the engine is not in operation when the results of the analysis are received, the owner or operator must change the oil within 2 days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

12.8 Operation of emergency generator (Unit #3)

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR § 63.6640(f), the owner or operator shall operate the emergency generator engine according to the following requirements:

1. There is no time limit on the use of emergency generator engine in emergency situations;
2. The owner or operator may operate the emergency generator engine for the purpose of maintenance checks and readiness testing, provided the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the emergency generator. Maintenance checks and readiness testing of the emergency generator engine is limited to 100 hours per year. The owner or operator may petition the Secretary for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating Federal, State, or local standards require maintenance and testing of the emergency generator beyond 100 hours per year; and
3. The owner or operator may operate the emergency generator engine up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; except the owner and operator may operate the emergency generator for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The emergency generator engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the emergency generator engine operation must be terminated immediately after the owner or operator is notified the emergency condition is no longer

imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph, as long as the power provided by the financial arrangement is limited to emergency power.

Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (1) through (3) of this permit condition, is prohibited. If the owner or operator does not operate the engine according to the requirements in this permit condition, the emergency generator will no longer be considered an emergency generator and will need to meet all applicable requirements for non-emergency generator in 40 CFR §§ 63.6580 through 63.6675, inclusive.

12.9 Recordkeeping for emergency generator (Unit #3)

In accordance with ARSD 74:36:08:40, as referenced to 40 CFR §§ 63.6655 and 63.6660, the owner or operator shall maintain the following records:

1. Records of all required maintenance performed on the engine to demonstrate compliance with permit condition 12.2 or 12.7;
2. Records of all required maintenance performed on the non-resettable hour meter;
3. Records of hours of operation identifying the reason for operation of the engine to demonstrate compliance with permit condition 12.6 and 12.8; and
4. Records of how the owner or operator complied with operating the emergency generator engine according to the manufacturer's emission-related instruction or the owner or operator's maintenance plan required in permit condition 12.4.

All records shall be maintained in a form suitable and readily available for expeditious review for 5 years following the date of each occurrence, measurement, maintenance, report or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site.

12.10 Circumvention not allowed

In accordance with ARSD 74:36:08:03, as referenced to 40 CFR § 63.4(b), no owner or operator shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere.

13.0 NSPS Requirements – Subpart JJJJ, Unit #5

13.1 Emission limits

In accordance with ARSD 74:36:07:90, as referenced to 40 CFR §§ 60.4233(e) and 60.4234, the owner or operator shall not allow emissions from the emergency generator to exceed the emission limits in Table 13-1 over the entire life of the emergency generator.

Table 13-1 – Emission limits for the emergency generator [1]

	Grams per Horsepower-Hour			Parts per Million by Volume at 15% Oxygen		
Fuel Type	**NOx [2]**	**CO [2]**	**VOC [2, 3]**	**NOx [2]**	**CO [2]**	**VOC [2, 3]**
Natural Gas	2.0	4.0	1.0	160	540	86

1 – The owner or operator may choose to comply with the emission standards in units of grams per horsepower-hour or parts per million by volume at 15 percent oxygen;
2 – "NOx" means nitrogen oxide, "CO" means carbon monoxide; and "VOC" means volatile organic compounds; and
3 – When calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

13.2 Compliance requirements

In accordance with ARSD 74:36:07:90, as referenced to 40 CFR § 60.4243(b), the owner or operator shall comply with the following:

1. Purchase an emergency generator certified to meet the emission in Table 13-1 and maintain a copy of the certification. The emergency generator must be installed and configured according to the manufacturer's specifications; and
2. Operate and maintain the emergency generator according to or consistent with the manufacturer's emission-related written instructions; and
3. Maintain a maintenance plan and records of conducted maintenance.

13.3 Emergency generator operation

In accordance with ARSD 74:36:07:90, as referenced to 40 CFR § 60.4243(d), the owner or operator may operate the emergency generator for the following reasons:

1. Emergency engines may be operated during emergency operations and maintenance checks/readiness testing as recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company. The maintenance checks/readiness testing is limited to 100 hours per year;
2. The owner or operator may exceed the maintenance checks/readiness testing limit of 100 hours if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency generators beyond 100 hours per year;
3. There is no time limit on the use of emergency generators in emergency situations;
4. Emergency generators may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance

and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity; and

5. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year is prohibited.

13.4 Installation of a non re-settable clock

In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall install a non re-settable clock on the emergency generator and continuously record the hours of operation.

13.5 Recordkeeping requirements

In accordance with ARSD 74:36:07:90, as referenced to 40 CFR § 60.4245(a), the owner or operator shall maintain the following records:

1. All notifications submitted to comply with this chapter and all documentation supporting any notification;
2. Maintenance conducted on the emergency generator; and
3. The owner operator shall maintain documentation that the emergency generator is meeting the emission standards in Table 13-1.