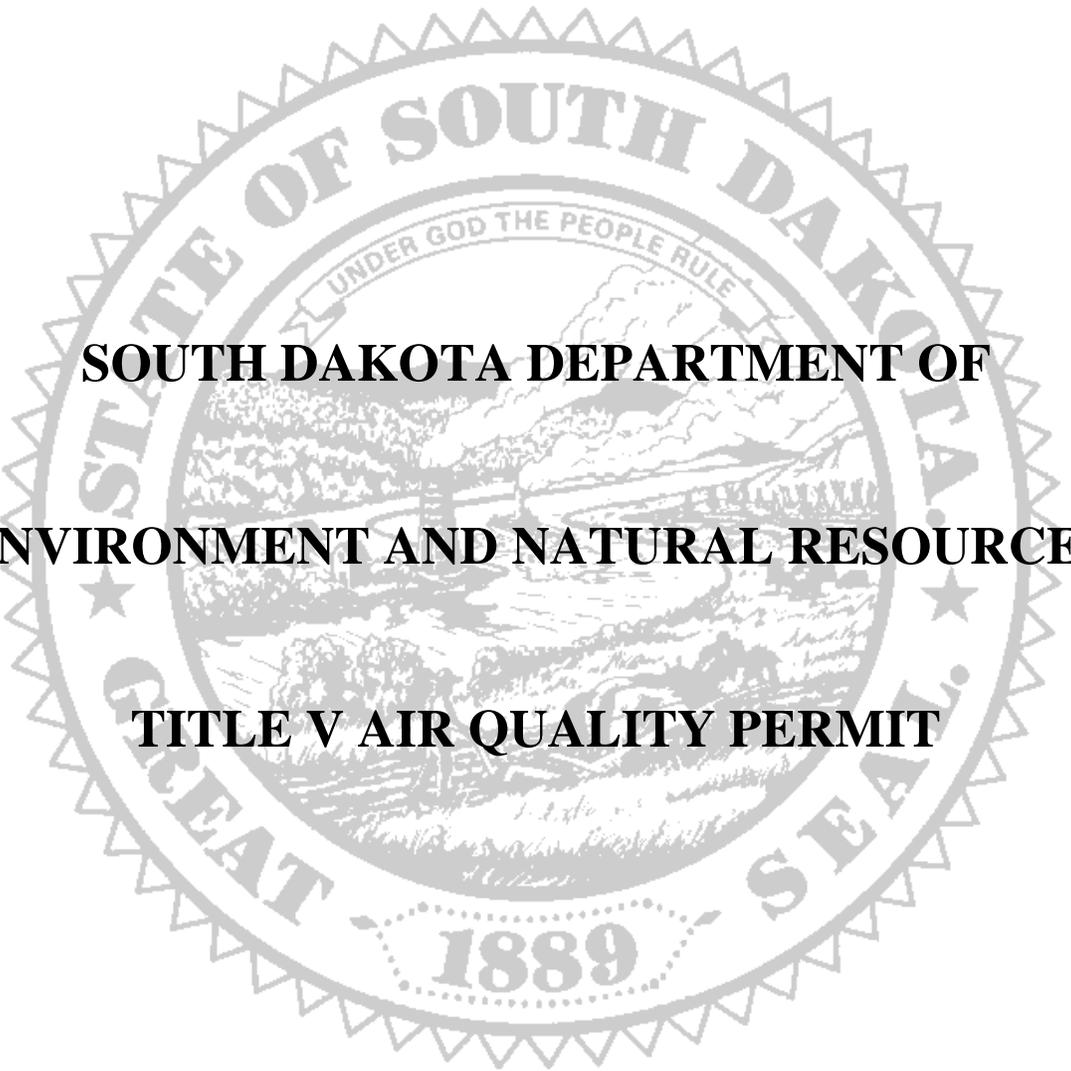


Permit #: 28.0801-04
Effective Date: October 17, 2007
Expiration Date: October 17, 2012

The seal of the State of South Dakota is a circular emblem with a serrated outer edge. It features a central landscape scene with a river, trees, and mountains. The text "STATE OF SOUTH DAKOTA" is written in an arc at the top, and "1889" is at the bottom. A banner across the middle reads "UNDER GOD THE PEOPLE RULE".

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



**Steven M. Pirner, P.E., 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

NorthWestern Energy
600 Market Street W
Huron, SD 57350

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

1 mile East of Huron on Highway #14

3. Permit Contact

Dennis Wagner, General Manager Production & Generation
(605) 353-7503

4. Facility Contact

Dennis Wagner, General Manager Production & Generation
(605) 353-7503

5. Responsible Official

Dennis Wagner, General Manager Production & Generation
(605) 353-7503

B. Permit Revisions or Modifications

Not applicable

C. Type of Operation

Electric peaking plant

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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 February 28, 2001, unless modified by the conditions of this permit. Except as otherwise provided herein, the control equipment shall be operated in 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

Unit	Description	Maximum Operating Rate	Control Device
#1	1962 Westinghouse combustion turbine fired with natural gas and distillate oil	15,000 kilowatts heat output or 229 million Btus per hour heat input	Not applicable
#2	#2A – 1973 Worthington/Turbo Power and Marine simple cycle combustion turbine fired with natural gas and distillate oil	19,000 kilowatts heat output or 262 million Btus per hour heat input	Water injection system
#3	#2B – 1978 Worthington/Turbo Power and Marine simple cycle combustion turbine fired with natural gas and distillate oil	27,000 kilowatts heat output or 345 million Btus per hour heat input	Water injection system
#4	1993 Power Flame propane vaporizer and flare fired with natural gas	5.3 million Btus per hour heat input	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 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 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 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 ARSD 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 REQUIREMENTS

5.1 **Record keeping and reporting.** In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain all monitoring data, records, reports, and pertinent information specified by this permit for five years from the date of sample, measurement, report, or application 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;
 - 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 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;
4. The duration of and the quantity of fuel oil, in gallons, used during a curtailment or testing event that is considered an emergency condition under permit condition 10.1.

5.5 Monthly records. In accordance with ARSD 74:36:05:16.01(9), the owner or operator shall maintain the following monthly records.

1. The amount of sulfur dioxide, in tons, emitted into the ambient air from the permitted units during the month and supporting documentation. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values;
2. The amount of nitrogen oxide, in tons, emitted into the ambient air from the permitted units during the month and supporting documentation. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values; and
3. The amount of carbon monoxide, in tons, emitted into the ambient air from the permitted units during the month and supporting documentation. A 12-month rolling total shall be calculated every month using that month's value and the previous 11 months' values.

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

1. The amount of natural gas burned in Unit #1, #2, #3, and #4;
2. The amount of distillate oil burned in Unit #1, #2, and #3;
3. The sulfur content of the distillate oil; and
4. The number of hours Unit #1, #2, #3, and #4 were operated.

The amount of natural gas and distillate oil consumed shall be based on consumption and purchase records.

5.7 Semiannual report. In accordance with ARSD 74:36:05:16:01(9), the owner or operator shall submit a semiannual report which contains the following information:

1. Name of the facility, permit number, reference to this permit condition, identifying the submittal as a semiannual report, and calendar dates covered in the reporting period;
2. The quantity of sulfur dioxide, nitrogen oxide, and carbon monoxide emitted, in tons, in each month and the 12-month rolling total for each month in the reporting period and supporting documentation; and
3. The requirements in permit condition 9.12.

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

5.8 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.

5.9 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. 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), 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	1962 Westinghouse combustion turbine	0.4 pounds per million Btu heat input

Unit	Description	Emission Limit
#2	#2A – 1973 Worthington/Turbo Power and Marine simple cycle combustion turbine	0.4 pounds per million Btu heat input
#3	#2B – 1978 Worthington/Turbo Power and Marine simple cycle combustion turbine	0.4 pounds per million Btu heat input
#4	1993 Power Flame propane vaporizer and flare	0.6 pounds per million Btu heat input

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	1962 Westinghouse combustion turbine	3.0 pounds per million Btu heat input
#2	#2A – 1973 Worthington/Turbo Power and Marine simple cycle combustion turbine	3.0 pounds per million Btu heat input
#3	#2B – 1978 Worthington/Turbo Power and Marine simple cycle combustion turbine	3.0 pounds per million Btu heat input
#4	1993 Power Flame propane vaporizer and flare	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 Plant wide sulfur dioxide emission limit. In accordance with ARSD74:36:05:16.01(8), the owner or operator shall not emit into the ambient air greater than or equal to 238 tons of sulfur dioxide per 12-month rolling period. The 12-month rolling period will continue from the previous permit.

6.6 Plant wide nitrogen oxide emission limit. In accordance with ARSD74:36:05:16.01(8), the owner or operator shall not emit into the ambient air greater than or equal to 238 tons of nitrogen oxide per 12-month rolling period. The 12-month rolling period will continue from the previous permit.

6.7 Plant wide carbon monoxide emission limit. In accordance with ARSD74:36:05:16.01(8), the owner or operator shall not emit into the ambient air greater than or equal to 238 tons of carbon monoxide per 12-month rolling period. The first month in the 12-month rolling period will be the 12th month prior to the issuance of this permit.

6.8 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

6.9 Circumvention not allowed. In accordance with ARSD 74:36:05:47.01 and ARSD 74:36:07:01, as referenced to 40 CFR § 60.12, the owner or operator shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

6.10 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, including periods of startup, shutdown, and malfunction, when practicable, maintain and operate all permitted units and associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection.

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 for carbon monoxide. In accordance with ARSD 74:36:11:02, the owner or operator shall conduct a performance test on Unit #2 and #3 within 180 days of the issuance of this permit. The performance test shall be conducted to determine carbon monoxide emission rates.

8.0 MONITORING

8.1 Periodic monitoring for opacity limits. In accordance with ARSD 74:36:13:07, the owner or operator shall demonstrate compliance with the opacity limits in Chapter 6.0, on an annual basis, but only if the unit is operated with distillate oil that year. This requirement is not applicable to Unit #4. The 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.

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

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 UNIT #3 NSPS REQUIREMENTS

9.1 Nitrogen oxide limit for Unit #3. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.332(a)(1) and (b), no owner or operator shall cause to be discharged into the atmosphere from Unit #3 any gases which contain nitrogen oxide in excess of 85 parts per million by volume at 15 percent oxygen and on a dry basis.

9.2 Ice fog exemption. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.332(f), Unit #3 is exempt from the nitrogen oxide emission limit in permit condition 9.2 when

ice fog is deemed a traffic hazard by the owner or operator. "Ice fog" means an atmospheric suspension of highly reflective ice crystals.

9.3 Water restriction exemption. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.332(i), Unit #3 is exempt from the nitrogen oxide emission limit in permit condition 9.2 if the Secretary determines that mandatory water restrictions are required because of drought conditions. This exemption will be allowed only while the mandatory water restrictions are in effect.

9.4 Sulfur dioxide limit for Unit #3. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.333, the owner or operator shall comply with one of the following sulfur dioxide emission limits:

1. No owner or operator shall cause to be discharged into the atmosphere from Unit #3 any gases which contain sulfur dioxide in excess of 150 parts per million by volume at 15 percent oxygen and on a dry basis; or
2. No owner or operator shall burn in Unit #3 any fuel which contains total sulfur in excess of 8000 parts per million by weight.

9.5 Water injection system. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.334(a), the owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in Unit #3.

9.6 Monitoring requirements during testing. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.334(g), the owner or operator shall monitor the water to fuel ratio during a performance test on Unit #3 to establish acceptable values and ranges that ensure compliance with permit condition 9.1. The owner or operator may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely.

9.7 Parameter monitoring plan. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.334(g), the owner or operator shall develop and maintain on-site a parameter monitoring plan which explains the procedures used to document proper operation of the nitrogen oxide emission controls for Unit #3. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan. If the owner or operator uses the low mass emissions methodology in 40 CFR § 75.19 or the nitrogen oxide emission measurement methodology in Appendix E to 40 CFR Part 75, the owner or operator may meet the requirements of this permit condition by developing and keeping on-site or at a central location for unmanned facilities a quality-assurance plan, as described in 40 CFR § 75.19(e)(5) or in section 2.3 of Appendix E and section 1.3.6 of Appendix B to 40 CFR Part 75.

9.8 Monitoring fuel sulfur content. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR §§ 60.334(h)(1) and 60.335(b)(10), the owner or operator shall monitor the total sulfur content of the fuel being fired in Unit #3, except as provided in permit condition 9.9. The sulfur content of the fuel shall be determined by collecting a minimum of three fuel samples during the performance test and analyze the samples for total sulfur content by one of the following methods:

1. For liquid fuels, ASTM D129–00, D2622–98, D4294–02, D1266–98, D5453–00 or D1552–01;
2. For gaseous fuels, ASTM D1072–80, 90 (Re-approved 1994); D3246–81, 92, 96; D4468–85 (Re-approved 2000); or D6667–01. The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the prior approval of the Secretary; or
3. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than 0.4 parts per million by weight, ASTM D4084–82, 94, D5504–01, D6228–98, or Gas Processors Association Standard 2377–86, which measure the major sulfur compounds may be used.

9.9 Sulfur content may not be required. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR §§ 60.331(u) and 60.334(h)(3), the owner or operator may elect not to monitor the total sulfur content of the gaseous fuel combusted in Unit #3, if the gaseous fuel is demonstrated to meet the definition of natural gas. Natural gas means a naturally occurring fluid mixture of hydrocarbons (*e.g.* , methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Natural gas contains 20.0 grains or less of total sulfur per 100 standard cubic feet. Equivalents of this in other units are as follows: 0.068 weight percent total sulfur, 680 parts per million by weight (ppmw) total sulfur, and 338 parts per million by volume at 20 degrees Celsius total sulfur. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value. The owner or operator shall use one of the following sources of information to make the required demonstration:

1. The gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, specifying that the maximum total sulfur content of the fuel is 20.0 grains/100 standard cubic feet or less; or
2. Representative fuel sampling data which show that the sulfur content of the gaseous fuel does not exceed 20 grains/100 standard cubic feet. At a minimum, the amount of fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR Part 75 is required.

9.10 Frequency of monitoring sulfur content. In accordance with ARSD 74:36:07:18, as referenced to 40 CFR § 60.334(i), the owner or operator shall monitor the total sulfur content of the fuel being fired in Unit #3 in the following frequency:

1. For fuel oil, use one of the total sulfur sampling options and the associated sampling frequency described below:
 - a. Conduct flow proportional oil sampling or continuous drip oil sampling in accordance with ASTM D4177–82 (Re-approved 1990), “Standard Practice for Automatic Sampling of Petroleum and Petroleum Products”, every day Unit #3 is combusting oil. Extract oil at least once every hour and blend into a composite sample. The sample compositing period may not exceed seven calendar days (168 hours). The total sulfur content shall be derived from the composite sample;
 - b. Representative oil samples may be taken from the storage tank or fuel flow line manually every day that Unit #3 combusts oil according to ASTM D4057–88, “Standard Practice for Manual Sampling of Petroleum and Petroleum Products”. The total sulfur content shall be derived from the representative sample;
 - c. Take a manual sample after each addition of oil to the storage tank. Do not blend additional fuel with the sampled fuel prior to combustion. Sample according to the single tank composite sampling procedure or all-levels sampling procedure in ASTM D4057–88, “Standard Practice for Manual Sampling of Petroleum and Petroleum Products”. The total sulfur content shall be derived from the manual sample; or
 - d. An oil sample may be taken from the shipment tank or container upon receipt of each lot of fuel oil or the supplier’s storage container which holds the lot of fuel oil. A “lot” is defined as a shipment or delivery (e.g., ship load, barge load, group of trucks, discrete purchase of diesel fuel through a pipeline, etc.) of a single fuel. Oil sampling may be performed either by the owner or operator, an outside laboratory, or a fuel supplier, provided that samples are representative and that sampling is performed according to either the single tank composite sampling procedure or the all-levels sampling procedure in ASTM D4057–88, “Standard Practice for Manual Sampling of Petroleum and Petroleum Products”.
2. For gaseous fuels, for an owner or operator that elects not to demonstrate sulfur content using permit condition 9.9 and for which the fuel is supplied without intermediate bulk storage, the sulfur content value of the gaseous fuel burned in Unit #3 shall be determined and recorded once operating day.

9.11 Startup, shutdown and malfunction log. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR §§ 60.7(b), the owner or operator shall maintain a startup, shutdown and malfunction log of the occurrence and duration of any startup, shutdown, or malfunction in the operation of Unit #3, any malfunction of the water injection system associated with Unit #3, or any periods during which the continuous monitoring system associated with Unit #3 is inoperative.

9.12 Semiannual report. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.7(c) and ARSD 74:36:07:18, as referenced to 40 CFR § 60.334(j), the owner or operator shall

submit a semiannual report which contains the following information associated with Unit #3 for all periods of operation, including startup, shutdown and malfunction:

1. Name of the facility, permit number, reference to this permit condition, identifying the submittal as a semiannual report, and calendar dates covered in the reporting period;
2. The magnitude of excess emissions, any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. An excess emission shall be any operating hour for which the average water to fuel ratio, as measured by the continuous monitoring system, falls below the acceptable water to fuel ratio needed to demonstrate compliance with permit condition 9.1, as established in the parameter monitoring plan in permit condition 9.7. Any operating hour in which no water is injected into the turbine shall also be considered an excess emission;
3. The operating time for Unit #3 during the reporting period;
4. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of Unit #3 and the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
5. The date and time identifying each period during which the continuous monitoring system associated with Unit #3 was inoperative except for zero and span checks and the nature of the system repairs or adjustments. A period of monitor downtime shall be any operating hour in which water is injected into the turbine, but the essential parametric data needed to determine the water to fuel ratio are unavailable or invalid
6. The average water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), and gas turbine load during each excess emission;
7. If the owner or operator is required to monitor the sulfur content of the fuel, the following shall be reported:
 - a. For samples of gaseous fuel and for oil samples obtained using daily sampling, flow proportional sampling, or sampling from storage tank(s) supplying fuel to Unit #3, an excess emission occurs each operating hour included in the period beginning on the date and hour of any sample for which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 weight percent and ending on the date and hour that a subsequent sample is taken that demonstrates compliance with the sulfur limit;
 - b. If the option to sample each delivery of fuel oil has been selected, the owner or operator shall immediately switch to one of the other oil sampling options (*i.e.* , daily sampling, flow proportional sampling, or sampling from the unit's storage tank) if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to subparagraph (7)(a) of this permit condition. When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option;
 - c. A period of monitor downtime begins when a required sample is not taken by its due date. A period of monitor downtime also begins on the date and hour of a required sample, if invalid results are obtained. The period of monitor downtime shall include only operating hours, and ends on the date and hour of the next valid sample;
8. Each period during which an ice fog exemption is in effect shall be reported. For each period, the ambient conditions existing during the period, the date and time the air pollution control

system was deactivated, and the date and time the air pollution control system was reactivated shall be reported;

9. Each period during which an emergency fuel exemption is in effect shall be included in the report. For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported; and
10. When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

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

9.13 Record keeping. In accordance with ARSD 74:36:07:01, as referenced to 40 CFR § 60.7(f), the owner or operator shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this chapter recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

10.0 ACID RAIN PROGRAM

10.1 Emergency fuel designation. In accordance with ARSD 74:36:16:01, as referenced to 40 CFR § 72.2, the owner or operator shall combust fuel oil only under emergency conditions when the primary fuel is not available.

10.2 Operating in accordance with acid rain permit application. In accordance with ARSD 74:36:16:01, as referenced to 40 CFR § 72, the owner or operator shall operate Unit #2 and #3 in accordance with the standard requirements set forth in the phase II acid rain permit application submitted February 4, 1998 (see Appendix A).

10.3 Reporting sulfur dioxide allowances. In accordance with ARSD 74:36:16:01(9) and ARSD 74:36:16:01, as referenced to 40 CFR § 72.9(c)(1), the annual compliance certification report required in permit condition 5.8 shall include a statement that the owner or operator held sulfur dioxide allowances in the account for Unit #2 and #3 that equaled or exceeded the actual sulfur dioxide emissions for the previous calendar year.

11.0 PSD EXEMPTION

11.1 PSD review exemption. The owner or operator is exempt from the Prevention of Significant Deterioration review for sulfur dioxide and nitrogen oxide. The exemption is based on operational and air emission limits in this permit. Any relaxation in this permit that increases

applicable emissions equal to or greater than the major source threshold under the Prevention of Significant Deterioration Program may require a full Prevention of Significant Deterioration review as though construction had not commenced on the source.