

AIR EMISSION PERMIT NO. 13900010- 003

IS ISSUED TO

NSP DBA XCEL ENERGY

NSP dba Xcel Energy - Blue Lake
1200 70th Street South
Shakopee, Scott County, MN 55379

The emission units, control equipment and emission stacks at the stationary source authorized in this permit are as described in the following permit application(s):

Permit Type	Application Date	Issue Date	Permit Action No.
Total Facility Operating Permit	09/15/1995	03/16/2000	001
Major Amendment	10/10/2002	03/19/2003	002
Major Amendment	01/21/2004, 03/03/2004	See below	003

This permit authorizes the Permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Part 70/Major for Acid Rain and NSR

Major Amendment

Issue Date: 03/16/2000

Issue Date: August 9, 2004

Expiration: 03/16/2005

All Title I Conditions do not expire.

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

AMF/JSC: lh

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: Compliance Schedule – Not Applicable

Appendices: Attached and Referenced in Table A

NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

The Blue Lake Generating Plant provides up to 205 Megawatts (MW) of peak electrical generation. The facility is composed of four combustion turbine generator sets that combust mainly fuel oil. The turbines may also fire used oil when sufficient quantity has accumulated in on-site storage. This on-site storage consists of two identical tanks each with a capacity of 2.5 million gallons. One tank is usually used strictly for the storage of waste oil. The facility also has two emergency diesel engines.

ACTION 002

This permitting action changes modeling requirements to reflect the current MPCA policy dated August 10, 2001. This permit changes the requirements from submittal of a protocol and modeling results, to the submittal of computer dispersion modeling information only. In addition, an administrative amendment application requesting extension of the information submittal deadline by 60 days, has been included in this permitting action.

MAJOR AMENDMENT DESCRIPTION

ACTION 003

This permit action authorizes installation and operation of two **natural gas-fired** (only fuel) simple cycle combustion turbines, each with a capacity of 160 megawatts (nominal), for electricity production. These turbines will be located adjacent to the four existing oil-fired combustion turbines.

THIS IS A SYNTHETIC MINOR MODIFICATION TO THE EXISTING MAJOR SOURCE UNDER PART 70 AND PSD PERMIT PROGRAMS.

The Permittee requested to pull out used mineral oil dielectric fluid as a fuel at the facility; therefore, permit conditions related to the use of mineral oil were eliminated at this time.

In addition, this permit action amends existing permit condition related to sulfur content (limit) in the fuel oil from 0.5 percent to 0.05 percent.

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item:**Total Facility**

What to do	Why to do it
HAPs - Total: less than or equal to 24.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month (based on fuel oil and natural gas usage) for the previous 12-month period.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 63.2; Minn. R. 7007.0200
Any Single HAP: less than or equal to 9.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month (based on fuel oil and natural gas usage) for the previous 12-month period.	Title I Condition: Limit to avoid classification as a major source under 40 CFR Section 63.2; Minn. R. 7007.0200
A. OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
C. TESTING REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals; Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-Test Meeting: due 7 day before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche/CD Copy: due 105 day after each Performance Test. The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	40 CFR Section 60.8(d); Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2018 and Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test apply until superceded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same emission unit.	Minn. R. 7017.2025
D. MONITORING REQUIREMENTS	hdr
Monitoring Activities and Equipment: Where applicable, initialize monitoring activities and install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring activities are not performed or monitoring equipment is not installed and operational prior to permit issuance.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
E. RECORDKEEPING	hdr
Monthly Recordkeeping - HAP Emissions. By the 15th of the month, the Permittee shall calculate and record: 1). The total HAP emissions in the previous calendar month using the fuel usage records. This record shall also include the individual and total HAP emissions in the previous month. 2). The 12 month rolling sum total and individual HAP emissions for the previous 12 month period by summing the monthly emissions data for the previous 12 months.	Title I Condition: Recordkeeping for a limit to avoid classification as a major source under 40 CFR Section 63.2; Minn. R. 7007.0200, and Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007. 0800, subp. 5(C)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
F. REPORTING	hdr
Oral or Written (faxed) Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through 7019.3010
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TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: GP 001 electric generating combustion turbines**Associated Items:** EU 001 Combustion turbine 1

EU 002 Combustion turbine 2

EU 003 Combustion turbine 3

EU 004 Combustion turbine 4

SV 001 Combustion Turbine 1

SV 002 Combustion Turbine 2

SV 003 Combustion Turbine 3

SV 004 Combustion Turbine 4

What to do	Why to do it
Sulfur Dioxide: less than or equal to 0.05 lbs/million Btu heat input . This limit applies to each emission unit.	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained. This limit applies to each emission unit.	Minn. R. 7011.2300, subp. 1
Allowable Fuel Type: Distillate fuel oil only.	Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight	Minn. R. 7007.0800, subp. 2; meets SO2 emission limit requirement in Minn. R. 7011.0510, subp. 1
Collect and retain on-site, distillate fuel oil supplier certification showing that each delivery (by truck or pipeline) of distillate fuel oil has a sulfur content of less than or equal to 0.05 percent by weight.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: GP 002 New Combustion Turbines and Associated Stacks**Associated Items:** EU 007 Combustion Turbine 7 - New

EU 008 Combustion Turbine 8 - New

SV 007 Combustion Turbine 7 - New

SV 008 Combustion Turbine 8 - New

What to do	Why to do it
GP 002 is subject to the U.S. EPA Acid Rain Program codified at 40 CFR Parts 72, and 75. EU 007 and EU 008 are each considered a utility unit and a new unit, and a gas-fired unit, as defined in 40 CFR Section 72.2. Some of the Acid Rain Program requirements are included in Tables A and B for MPCA tracking purposes. The Permittee submitted an Acid Rain Permit Application as part of the permit amendment application.	40 CFR Part 72
The Permittee is not required to use Continuous Emission Monitors (CEM) for sulfur dioxide or nitrogen oxides by this permit, provided the Permittee complies with the requirements of 40 CFR Part 75 Appendix D (for sulfur dioxide) and Appendix E (for nitrogen oxides, shown below). If the Permittee chooses to install and operate a CEM for either sulfur dioxide or nitrogen oxides, or becomes ineligible for the use of Appendix E, the Permittee shall comply with the requirements listed below for CEM and requirements listed in GP 003.	40 CFR Section 75.10(a)(1) and 75.10(a)(2)
NOx Emissions Monitoring - lb/mmBtu: The Permittee shall determine NOx emissions in lb/mmBtu, according Appendix E to Part 75 - Optional NOx Emissions Estimation Protocol For Gas-fired Peaking Units and Oil-fired Peaking Units. Appendix E requires the following, in part: 1. Initial Performance Test for: measuring NOx emission rates at heat input rate levels corresponding to different load levels; measuring heat input rate; and plotting the correlation between heat input rate and NOx emission rate, in order to determine the emission rate of the unit(s); 2. Load Selection: Establish at least four approximately equally spaced operating load points, ranging from the maximum operating load to the minimum operating load. For new gas-fired peaking units, select the maximum and minimum operating load from the expected maximum and minimum load to be dispatched to the unit in the first five calendar years of operation; (cont.)	40 CFR Section 75.10
NOx Emissions Monitoring - lb/mmBtu (continued from above): 3. NOx and O2 Concentration Measurements: Use the procedures in sections 2.1.2.2 and 2.1.2.3 to measure NOx and O2 concentration in order to determine NOx emission rate; 4. Heat Input: (a) Measure the total heat input (mmBtu) and heat input rate during initial performance testing (mmBtu/hr) and during each hour fuel is combusted in EU 007 and EU 008 by measuring fuel flow with automatic recording in-line flow meters (refer to section 2.4.1 for determining heat input when fuel is for only a partial hour). Install and calibrate in-line flow meters using the procedures and specifications contained in sections 2.1.2, 2.1.3, 2.1.4, and 2.1.5 of appendix D of 40 CFR part 75. Correct any gaseous fuel flow rate measured at actual temperature and pressure to standard conditions of 68 degrees F and 29.92 inches of mercury; (cont.)	40 CFR Section 75.10

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

<p>NOx Emissions Monitoring - lb/mmBtu (continued from above):</p> <p>4. Heat Input: (b). Determine heat content of the gaseous fuel in accordance with procedures in appendix F of 40 CFR part 75. Calculate the heat input rate during testing (mmBtu/hr) associated with each load condition in accordance with equations F-19 or F-20 in appendix F of 40 CFR part 75 and total heat input using equation E-1 of appendix E of 40 CFR part 75. Record the heat input rate at each heat input/load point;</p> <p>5. Tabulation of Results: Tabulate the results of each baseline correlation test, listing: time of test, duration, operating loads, heat input rate (mmBtu/hr), F-factors, excess oxygen levels, and NOx concentration (ppm) on a dry basis. Convert the NOx concentrations (ppm) to NOx emission rates (lb/mmBtu). Calculate the NOx emission rate in lb/mmBtu for each sampling point and determine the arithmetic average NOx emission rate of each test run;</p> <p>(cont.)</p>	40 CFR Section 75.10
<p>NOx Emissions Monitoring - lb/mmBtu (continued from above):</p> <p>6. Plotting of Results: Plot the tabulated results as an x-y graph for fuel combusted according to the procedures in section 2.1.6.1 and 2.1.6.2 of 40 CFR part 75;</p> <p>7. Other Quality Assurance/Quality Control-Related NOx Emission Rate Testing: For a stationary gas turbine, obtain a list of at least four operating parameters indicative of the turbine's NOx formation characteristics, and the recommended ranges for these parameters at each tested load-heat input point, from the gas turbine manufacturer;</p> <p>8. Follow Procedures for Determining Hourly NOx Emission Rate in section 2.4 to determine hourly NOx in lb/mmBtu using hourly load, fuel flow, heat input, and the graph of baseline correlation results for the fuel and heat input rate;</p> <p>9. Use missing data procedures in section 2.5 when appropriate;</p> <p>(cont.)</p>	40 CFR Section 75.10
<p>NOx Emissions Monitoring - lb/mmBtu (continued from above):</p> <p>10. Use a computer program or other data reduction system to calculate and record NOx emission rates in lb/mmBtu on an hourly basis;</p> <p>11. Follow calculation procedures identified in Section 3 of Appendix E to calculate Heat Input, F-factor, and Conversion from Concentration to Emission Rate;</p> <p>12. Report the quarterly average emission rate (lb/mmBtu) as required in subpart G of 40 CFR Part 75. Calculate the quarterly average NOx emission rate according to equation F-9 in Appendix F;</p> <p>13. Report the average emission rate (lb/mmBtu) for the calendar year as required in subpart G of 40 CFR Part 75. Calculate the average NOx emission rate according to equation F-10 in Appendix F;</p> <p>(contd.)</p>	40 CFR Section 75.10
<p>NOx Emissions Monitoring - lb/mmBtu (continued from above):</p> <p>14. Quality Assurance/Quality Control Plan - Include a section on the NOx emission rate determination as part of the monitoring quality assurance/quality control plan required under 40 CFR Section 75.21 and appendix B of 40 CFR Part 75 for each gas-fired peaking unit;</p> <p>15. Submit a copy of the unit manufacturer's recommended range of operating parameter values, and the range of operating values recorded during the previous NOx emission rate test that determined the unit's NOx emission rate, along with the unit's revised monitoring plan submitted with the certification application;</p> <p>16. Keep records of these operating parameters for each hour of operation in order to determine that a unit is remaining within the manufacturer's recommended range.</p> <p>Refer to Appendix E for additional details and requirements.</p>	40 CFR Section 75.10

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Periodic NOx Emission Rate Testing: Retest the NOX emission rate of the gas-fired peaking unit or the oil-fired peaking unit while combusting each type of fuel (or fuel mixture) for which a NOX emission rate versus heat input rate correlation curve was derived, at least once every 20 calendar quarters. If a required retest is not completed by the end of the 20th calendar quarter following the quarter of the last test, use the missing data substitution procedures in section 2.5 of this appendix, beginning with the first unit operating hour after the end of the 20th calendar quarter. Continue using the missing data procedures until the required retest has been passed. Each time that a new fuel-specific correlation curve is derived from retesting, the new curve shall be used to report NOX emission rate, beginning with the first operating hour in which the fuel is combusted, following the completion of the retest.	40 CFR Section 75.10, Appendix E (section 2.2)
<p>Nitrogen Oxides: less than or equal to 38.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month based on data from Continuous Emissions Monitoring System (CEMS) or natural gas usage for the previous 12-month period.</p> <p>For calculations of Nitrogen Oxides, use NOx CEM and diluent monitor to determine NOx ppm and lb/mmBtu. Calculate hourly heat input according to appendix F (see section 5 in Appendix F of 40 CFR Part 75).</p> <p>The Permittee may also use EPA's AP-42 emission factor until an approved emission factor from a most recent stack test is available at this facility for compliance calculations.</p>	Title I Condition: Limit taken to avoid a major modification status under 40 CFR Section 52.21, for NOx emissions; Minn. R. 7007.3000
<p>Sulfur Dioxide: less than or equal to 38.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month (based on data from Continuous Emissions Monitoring System (CEMS) or natural gas usage) for the previous 12-month period.</p> <p>See Appendix D Section 2.3 of 40 CFR Part 75 for procedures to determine the sulfur content and gross calorific value of gaseous fuel. The Permittee may use EPA's AP-42 emission factor or other emission factor approved by the Commissioner for this facility, or an approved emission factor from a most recent stack test for this facility for compliance calculations.</p>	Title I Condition: Limit taken to avoid a major modification status under 40 CFR Section 52.21, for SO2 emissions; Minn. R. 7007.3000
<p>Carbon Monoxide: less than or equal to 95.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month based on data from Continuous Emissions Monitoring System (CEMS) or natural gas usage for the previous 12-month period.</p> <p>The Permittee may use EPA's AP-42 emission factor or other emission factor approved by the Commissioner for this facility, or an approved emission factor from a most recent stack test for this facility for compliance calculations.</p>	Title I Condition: Limit taken to avoid a major modification status under 40 CFR Section 52.21, for CO emissions; Minn. R. 7007.3000
<p>Volatile Organic Compounds: less than or equal to 38.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month based on data from natural gas usage for the previous 12-month period.</p> <p>The Permittee may use EPA's AP-42 emission factor or other emission factor approved by the Commissioner for this facility, or an approved emission factor from a most recent stack test for this facility for compliance calculations.</p>	Title I Condition: Limit taken to avoid a major modification status under 40 CFR Section 52.21, for CO emissions; Minn. R. 7007.3000
<p>Total Particulate Matter: less than or equal to 24.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month (based on natural gas usage) for the previous 12-month period.</p> <p>The Permittee may use EPA's AP-42 emission factor or other emission factor approved by the Commissioner for this facility, or an approved emission factor from a most recent stack test for this facility for compliance calculations.</p>	Title I Condition: Limit to avoid classification as a major modification under 40 CFR Section 52.21, for Total Particulate Matter (PM); Minn. R. 7007.3000.
<p>Particulate Matter < 10 micron: less than or equal to 14.0 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month (based on natural gas usage) for the previous 12-month period.</p> <p>The Permittee may use EPA's AP-42 emission factor or other emission factor approved by the Commissioner for this facility, or an approved emission factor from a most recent stack test for this facility for compliance calculations.</p>	Title I Condition: Limit to avoid classification as a major modification under 40 CFR Section 52.21, for Particulate Matter less than 10 micron (PM10); Minn. R. 7007.3000.

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

<p>Monthly Recordkeeping of emissions - Nitrogen Oxides (NOx), Sulfur Dioxide (SO₂), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), Total Particulate Matter (PM), Particulate Matter (PM₁₀) less than 10 microns in size.</p> <p>By the 15th of the month, the Permittee shall calculate and record:</p> <p>1). The total NOx, SO₂, CO, VOC, PM, PM₁₀ emissions in the previous calendar month using the fuel usage and/or CEMS records. This record shall also include the individual and total emissions in the previous month.</p> <p>2). The 12 month rolling sum total NOx, SO₂, CO, VOC, PM, PM₁₀ emissions for the previous 12 month period by summing the monthly emissions data for the previous 12 months.</p>	<p>Title I Condition: Recordkeeping for a limit to avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000, and Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Opacity: less than or equal to 20 percent once operating temperatures have been attained. This limit applies to each emission unit.</p>	<p>Minn. R. 7011.2300, subp. 1</p>
<p>Nitrogen Oxides: less than or equal to 110 parts per million using 3-hour Average by volume on a dry basis corrected to 15 percent oxygen. This limit applies at all times except during startup, shutdown, or malfunction.</p>	<p>40 CFR Section 60.332(a)(1)</p>
<p>Sulfur Dioxide: less than or equal to 0.015 percent by volume at 15 percent oxygen and on a dry basis. The fuel sulfur content shall not exceed 0.8 percent by weight.</p>	<p>40 CFR Section 60.333 and Minn. R. 7011.2300, subp. 2</p>
<p>Fuel Monitoring: The Permittee shall follow procedures in 40 CFR Section 60.334(b) to monitor sulfur content and nitrogen content of the fuel being fired in the turbines EU 007 and EU 008, unless the Administrator approves a custom schedule according to 40 CFR Section 60.334(b)(2) or alternative monitoring procedures according to 40 CFR Section 60.13(i).</p>	<p>40 CFR Section 60.334(b) and 40 Section 60.13(i)</p>
<p>Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the EU 007, EU 008, or any periods during which a continuous monitoring system or monitoring device is inoperative.</p>	<p>40 CFR Section 60.7(b), Minn. R. 7019.0100, subp. 1</p>
<p>Notification of any physical or operational change which may increase emissions, in accordance with 40 CFR 60.7 (a)(4). The notification shall be postmarked 60 days or as soon as practicable before the change is commenced.</p>	<p>40 CFR Section 60.7(a)(4)</p>
<p>Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of performance test. Emissions in excess of the level of the applicable emission limit during the periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit set by Minnesota Rules (Minn. Rules ch. 7011), or federal new source performance standards (40 CFR Part 60).</p>	<p>40 CFR Section 60.8(c), Minn. R. 7017.2025, subp. 1</p>
<p>Initial Performance Test: due 180 days after Initial Startup but no later than 60 days after achieving the maximum production rate at which the affected facility will be operated, to measure Nitrogen Oxide emissions in accordance with the procedures specified in 40 CFR 60, Subp. GG, 40 CFR Sections 60.8(b), 60.8(c), and 60.335(c).</p>	<p>Minn. R. 7017.2020, subp. 1; 40 CFR Section 60.8(a) and 40 CFR Section 60.335(c)</p>
<p>Fuel Allowed: Natural gas as defined in 40 CFR Section 72.2.</p>	<p>Minn. R. 7007.0800, subp. 2</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: GP 003 Continuous Emission Monitors for EU 007, EU 008**Associated Items:** SV 007 Combustion Turbine 7 - New

SV 008 Combustion Turbine 8 - New

What to do	Why to do it
OPTIONAL CONTINUOUS EMISSION MONITOR REQUIREMENTS	hdr
The Permittee is not required to use Continuous Emission Monitors (CEM) for sulfur dioxide or nitrogen oxides by this permit, provided the Permittee complies with the requirements of 40 CFR Part 75 Appendix D (for sulfur dioxide) and Appendix E (for nitrogen oxides, shown below). If the Permittee chooses to install and operate a CEM for either sulfur dioxide or nitrogen oxides, or becomes ineligible for the use of Appendix E, the Permittee shall comply with the requirements listed below. The permit conditions listed below for CO CEMS are only applicable if the Permittee chooses to install and operate CO CEMS.	40 CFR Section 75.10(a)(1) and 75.10(a)(2)
Emissions Monitoring: The Permittee shall install, certify, operate, and maintain, in accordance with all requirements of 40 CFR Section 75.10, a NOx continuous emission monitoring system (consisting of a NOx pollutant concentration monitor and an O2 or CO2 diluent gas monitor) with the automated data acquisition and handling system for measuring and recording NOx concentration (in ppm), O2 or CO2 concentration (in percent O2 or CO2) and NOx emission rate (in lb/mmBtu) discharged to the atmosphere, except as provided in 40 CFR Section 75.12 and 75.17 and subpart E of 40 CFR Section 75.10.	40 CFR Section 75.10(a)(2)
Installation Notification: due 60 days before installing the Continuous Emission Monitoring System (CEMS).	Minn. R. 7017.1040, subp. 1
CO CEMS Certification Test: due within 90 days after the due date of the first excess emission report required for the CO CEMS. Follow the Performance Specifications listed in 40 CFR Part 60, Appendix B.	Minn. R. 7017.1050, subp. 1
CEM Certification Test Pretest Meeting: due 7 days before CEM Certification Test for each emission unit and the associated stack.	Minn. R. 7017.1060, subp. 3
Continuous Operation: NOx and CO CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A NOx, CO CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. Acceptable monitor downtime includes reasonable periods due to the following causes: A. damage to the monitoring system due to Acts of God such as lightning strikes, tornadoes, or floods which render the monitor inoperative; B. sudden and not reasonably preventable breakdowns; C. scheduled monitor maintenance based upon equipment manufacturer's recommended maintenance schedule which cannot reasonably be conducted when the emission unit is not operating; or	40 CFR section 60.13(e), Minn. R. 7017.1090, subp. 1
Continuous Operation: continued... D. unavoidable monitor downtime in order to conduct daily drift checks, calibration error audits, relative accuracy test audits, linearity checks, and cylinder gas audits required by a compliance document, applicable requirement, or by request of the commissioner.	40 CFR section 60.13(e), Minn. R. 7017.1090, subp. 1
NOx CEMS Certification Test: due in accordance with 40 CFR Section 75.4(b). Certify all CEMS required by the Acid Rain Program in accordance with 40 CFR pt. 75, Appendix A for each emission unit and the associated stack. AND Not later than 90 days after each unit commences commercial operation. A unit shall be considered to have commenced commercial operation when it produces power for sale, or capacity for sale.	40 CFR Section 75.4(b)
CEMS Quality Assurance/Quality Control (QA/QC): The owner or operator of an affected facility shall operate, calibrate, and maintain each CEMS according to the QA/QC procedures in 40 CFR pt. 75, appendix B as amended.	40 CFR Section 75.21
Daily Calibration error (CE) Test: conduct daily CE testing on all CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, appendix B.	40 CFR pt. 75, Appendix B, section 2.1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

CO CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily. The CO CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR pt. 60, Appendix B. 40 CFR pt. 60, Appendix F, shall be used to determine out-of-control periods for CO CEMS.	Minn. R. 7017.1170, subp. 3
Cylinder Gas Audit (CGA): due before end of each calendar half-year following CO CEMS Certification Test. Conduct CGA at least 3 months apart and not greater than 8 months apart. If a RATA is performed during the calendar half-year the CGA is not required. Follow the procedures in 40 CFR pt. 60, Appendix F.	Minn. R. 7017.1170, subp. 4
CO CEMS Cylinder Gas Audit (CGA) Results Summary: due 30 days after end of each calendar half-year following CGA.	Minn. R. 7017.1180, subp. 1
CO CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CO CEMS Certification Test. If the relative accuracy is 15% or less the next CO CEMS RATA is not due for 24 months. Follow the procedures in 40 CFR pt. 60, Appendix B and Appendix F.	Minn. R. 7017.1170, subp. 5
<p>Linearity and Leak Check Test (Acid Rain Program): due before end of each calendar quarter following CEM Certification Test in accordance with procedures in 40 CFR pt. 75, Appendix B, Sections 2.2.1 and 2.2.2, and Appendix A, Section 6.2.</p> <p>Perform a leak check at least once during each QA operating quarter (calendar quarter in which there are at least 168 unit operating hours) and no less than 30 days apart.</p> <p>Leak Check Test is inapplicable if the Permittee is not required to monitor Flowrate.</p>	40 CFR pt. 75, Appendix B, section 2.2.1 & section 2.2.2; Minn. R. 7017.1020
CEMS Relative Accuracy Test Audit (RATA): due before end of each half-year following CEM Certification Test, i.e., once every two successive QA operating quarters (calendar quarter in which there are at least 168 unit operating hours). Conduct a RATA on all CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B. Relative accuracy test audits may be performed annually (i.e., once every four successive QA operating quarters, rather than once every two successive QA operating quarters) if any of the conditions listed in 40 CFR pt. 75, Appendix B, Section 2.3.1.2(a) through Section 2.3.1.2(i) are met.	40 CFR pt. 75, Appendix B, section 2.3.1; Minn. R. 7017.1020
Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130; and 40 CFR Section 75.50

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 001 Combustion turbine 1**Associated Items:** GP 001 electric generating combustion turbines

SV 001 Combustion Turbine 1

What to do	Why to do it
Performance Test: due 90 days after 03/16/2000 to measure Opacity. Future opacity testing shall be conducted on a 48 month interval.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 002 Combustion turbine 2**Associated Items:** GP 001 electric generating combustion turbines

SV 002 Combustion Turbine 2

What to do	Why to do it
Performance Test: due 455 days after 03/16/2000 to measure Opacity. Future opacity testing shall be conducted on a 48 month interval.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 003 Combustion turbine 3**Associated Items:** GP 001 electric generating combustion turbines

SV 003 Combustion Turbine 3

What to do	Why to do it
Performance Test: due 820 days after 03/16/2000 to measure Opacity. Future opacity testing shall be conducted on a 48 month interval.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 004 Combustion turbine 4**Associated Items:** GP 001 electric generating combustion turbines

SV 004 Combustion Turbine 4

What to do	Why to do it
Performance Test: due 1185 days after 03/16/2000 to measure Opacity. Future opacity testing shall be conducted on a 48 month interval.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 005 Emergency Engine/Generator**Associated Items:** SV 005 Emergency Engine/Generator

What to do	Why to do it
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Allowable Fuel Types: Distillate fuel oil.	Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight for all fuel types.	Minn. R. 7007.0800, subp. 2; meets SO2 emission limit requirement in Minn. R. 7011.0510, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Subject Item: EU 006 Diesel Fire Pump**Associated Items:** SV 006 Fire Pump

What to do	Why to do it
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Allowable Fuel Types: Distillate fuel oil.	Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight for all fuel types.	Minn. R. 7007.0800, subp. 2; meets SO2 emission limit requirement in Minn. R. 7011.0510, subp. 1

TABLE B: SUBMITTALS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send any application for a permit or permit amendment to:

Permit Technical Advisor
Permit Section
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:

- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Unless another person is identified in the applicable Table, send all other submittals to:

Supervisor
Compliance Determination Unit
Air Quality Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
CEM Certification Test Plan	due 30 days before CEM Certification Test for each emission unit and the associated stack.	GP003
CEM Certification Test Report - Microfiche Copy	due 105 days after CEM Certification Test	GP003
CEM Certification Test Report	due 45 days after CEM Certification Test	GP003
Computer Dispersion Modeling Information	<p>due 1,156 days after 03/16/2000. Submit modeling data as specified in MPCA guidance for Modeling Information Requests PM10, SO2, and NOx. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p> <p>The Permit application material submitted in 2004 supercedes the submittal required per this condition.</p>	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of EU 007 and EU 008.	GP002
Notification of the Date Construction Began	due 30 days after Start Of Construction of EU 007 and EU 008.	GP002
Relative Accuracy Test Audit (RATA) Notification	due 30 days before CEMS Relative Accuracy Test Audit (RATA)	GP003
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after CEMS Relative Accuracy Test Audit (RATA)	GP003

TABLE B: RECURRENT SUBMITTALS

08/09/04

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010 - 003

What to send	When to send	Portion of Facility Affected
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Initial Startup of the Monitor (Submit Deviations Reporting Form DRF-1 as amended). The EER must contain all of the information requested in 40 CFR60.7(c). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	GP003
Linearity Test Results Summary	due 30 days after end of each calendar quarter following Linearity and Leak Check Test (Acid Rain Program). Leak Check Test is inapplicable if the Permittee is not required to monitor Flowrate.	GP003
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 03/16/2000. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations. Excess emissions shall be included in the report as required by 40 CFR Section 60.7(c).	Total Facility
Compliance Certification	due 30 days after end of each calendar year starting 03/16/2000 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX MATERIAL

Facility Name: NSP dba Xcel Energy - Blue Lake

Permit Number: 13900010-003

ACID RAIN PERMIT APPLICATION



xcel-bluelake.pdf

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13900010-003

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the preliminary determination to issue the permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 4911)
NSP dba Xcel Energy 414 Nicollet Mall Minneapolis, MN 55401-1993 Contact: Nancy Stafki (612) 330-5520	1200 70th Street South Shakopee Scott County

1.2. Description of the Permit Action

This permit action authorizes installation and operation of two **natural gas-fired** (only fuel) simple cycle combustion turbines, each with a capacity of 160 megawatts (nominal), for electricity production. These turbines will be located adjacent to the four existing oil-fired combustion turbines.

THIS IS A SYNTHETIC MINOR MODIFICATION TO THE EXISTING MAJOR SOURCE UNDER PART 70, ACID RAIN AND PSD PERMIT PROGRAMS.

The Permittee requested to pull out used mineral oil dielectric fluid as a fuel at the facility; therefore, permit conditions related to the use of mineral oil were eliminated at this time. In addition, this permit action amends existing permit condition related to sulfur content (limit) in the fuel oil from 0.5 percent to 0.05 percent.

1.3 Title I Conditions added:

The Permittee requested that this facility remain a non-major source under 40 CFR Part 63. Hence, there are two conditions added under the Total Facility part of the permit with limits for hazardous air pollutants.

Title I Conditions are also added limiting the Criteria Pollutants below the Major Modification thresholds for GP 002 – New Combustion Turbines and Associated Stacks.

1.4 Facility Emissions:

Table 1. Total Facility Potential to Emit Summary

Pollutant	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Limited Potential Emissions from Modification	24.0	14.0	38.0	38.0	95.0	38.0	9.0	24.0
Total Facility (with) Modification	743.0	743.0	5977.0	8275.0	667.0	451.0	9.0	24.0
Total Facility Actual Emissions (2002)	0.54	0.54	2.22	39.27	0.16	0.59	HAPs are not reported under Emissions Inventory	

Table 2. Modification Classification

Classification	Major/Affected Source	Synthetic Minor	Minor
PSD		PM, PM ₁₀ , SO ₂ , NO _x , CO, VOC	
Part 63 NESHAP		HAPs	

2. Regulatory and/or Statutory Basis

New Source Review

The facility is an existing major source under New Source Review regulations.

Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

40 CFR Part 60 - New Source Performance Standards (NSPS)

New Source Performance Standards subpart GG are applicable to the new turbine operations at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility has accepted limits on HAP emissions from the fuel usage such that it is a non-major source under 40 CFR pt. 63. Thus, no NESHAPs apply.

Minnesota State Rules

Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Table 3. Regulatory Overview of Units Affected by the Modification/Permit Amendment

FC, EU, GP, or SV	Applicable Regulations	Comments:
FC	Title I limit to avoid NESHAPs	Limit set on HAPs emissions from the facility to avoid major source classification under 40 CFR § 63.
GP 001	Minn. R. 7011.2300, subp. 2	Sulfur content in fuel oil less than or equal to 0.05 percent. SO ₂ emissions ≤ 0.05 lb/mm Btu heat input.
GP 002	40 CFR § 52.21	Operational limits taken to keep the potential emissions increase of NO _x , SO ₂ , CO, VOC, PM, and PM ₁₀ from the combustion turbines to less than significant as defined by 40 CFR § 52.21.
GP 002	40 CFR Part 60, subpart GG; Minn. R. 7011.2300	Standards of Performance for Stationary Gas Turbines. Standards of Performance for Stationary Internal Combustion Engines.
GP 002	40 CFR Part 72 and 75	Acid Rain Program Requirements.
GP 003	40 CFR Part 75	Continuous Emission Monitoring Systems (CEMS) - the permit conditions apply only when if the CEMS are used.

3. Technical Information

3.1 Calculations of Potential to Emit and Emissions Increase Analysis - are enclosed to the TSD

NO_x annual limit was the determining factor for annual operational limits. This permit limits the pollutants and not the hours of operation. The Permittee projects that it would take 1,339 hours combined for EU 007 and EU 008 to be limited with synthetic minor modification thresholds. The Permittee has the flexibility to use AP-42 emission factors or stack test data or CEMS data to calculate the emissions. Records of fuel usage can be used calculate hazardous air pollutant emissions for the entire facility.

3.2 Environmental Review Process: The Environmental Quality Board and the Public Utility Commission are reviewing the EAW for this project. No Air Emission Risk Analysis is required for this project as the fuel is natural gas only and the PTE is less than 100 tpy.

3.3 Permit Organization – Two new groups added; Meets Delta general guidance.

3.4 Modeling Information Review: The MPCA staff reviewed the modeling information submittal to make sure that the ambient air concentrations are not exceeded.

Conclusion: Xcel Energy and their consultant, Barr Engineering, conducted air dispersion modeling to demonstrate that operations from Xcel's Blue Lake Generating Plant would not cause or contribute to modeled impacts greater than Minnesota or National Ambient Air Quality Standards (MN/NAAQS) for CO, NO_x, SO₂, and PM₁₀. The submittal included the facility's four existing oil-fired combustion turbines and two proposed gas-fired turbines. Air quality impacts from other sources were included in the analysis through use of pollutant-specific "background concentrations," which were added to Blue Lake's ambient impact for comparison to ambient standards. The analysis used US EPA's ISC-PRIME dispersion model and followed MPCA modeling guidance on other assumptions and model options. Predicted impacts did not exceed MN/NAAQS. Model parameters, assumptions, and limits will be included in Blue Lake's air emissions permit.

3.4 Comments Received: No comments were received during the 30-day comment period.

4. Conclusion

Based on the information provided by NSP dba Xcel Energy, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13900010-003 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: John Chikkala (permit engineer)
Bob Berg/Betsy Randt (enforcement)
Jim Kolar and Sarah Kilgriff (stack testing)
Dave Beil (peer reviewer)
Chris Nelson (modeling reviewer)

Attachments: 1. Calculation Spreadsheets
2. Facility Description and CD-01 Forms