

**AIR EMISSION PERMIT NO. 16300005-010**  
**Major Amendment**

**IS ISSUED TO**

Northern States Power Co dba Xcel Energy

**XCEL ENERGY - ALLEN S KING GENERATING**  
Highway 95 & Point Road  
Oak Park Heights, Washington County, MN 55082

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 16300005-009 and authorizes the Permittee to operate and modify 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.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the State Implementation Plan under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

**Permit Type:** Federal; Pt 70/Major for NSR

**Operating Permit Issue Date:** March 28, 2009

**Authorization to Construct and Operate (40 CFR § 52.21) Issuance Date:** March 19, 2009

**Major Amendment Issue Date:** May 5, 2009

**Expiration Date:** March 28, 2010  
– Title I Conditions do not expire.

---

Don Smith, P.E., Manager  
Air Quality Permits Section  
Industrial Division

for Paul Eger  
Commissioner  
Minnesota Pollution Control Agency

**Permit Applications Table**

<b>Permit Type</b>	<b>Application Date</b>	<b>Permit Action</b>
Title V Reissuance	January 17, 2003	005
Administrative Amendment	January 13, 2006	006
Major Amendment	August 21, 2006	007
Major Amendment	December 7, 2007	008
Major Amendment	April 8, 2008	010

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Table C: not used in this permit**

**Appendix A: not used in this permit**

**Appendix B: GP 005 Calculations**

**Appendix C: PM<sub>10</sub> Modeling Parameters**

**Appendix D: Insignificant Activities**

**Appendix E: Acid Rain Forms**

**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 Allen S. King Generating Plant (King Plant) is a coal-fired electric utility located on Highway 95 in Oak Park Heights, Minnesota and has a Part 70 operating permit. The facility's emission sources consist of boilers; fuel and ash storage and handling equipment; and emergency diesel engines. The facility's main power boiler (Boiler No. 1) is a coal-fired cyclone boiler with a generating capacity of 550 megawatts of electricity.

The Rehabilitation Project authorized through permit action 005 included the installation of new pollution control equipment, modification of the plant heat rejection system, and rehabilitation and life extension of the main (EU001, coal-fired) boiler. The rehabilitation will allow the plant to operate at a capacity approaching its original design rating.

The boiler rehabilitation consisted of the replacement of the furnace floor and support system, the installation of new cyclone burners and re-entrant throats, the replacement of the furnace sidewalls and furnace floor tubes, and the installation of induced draft fans to accommodate additional draft requirements of new control equipment.

The new (additional) control equipment consists of Selective Catalytic Reduction reactor for control of nitrogen oxides emissions, a spray dryer absorber lime-based semi-dry Flue Gas Desulfurization system for control of sulfur dioxide emissions, and a Pulse-Jet cleaned Fabric Filter for additional control of particulate matter.

**AMENDMENT DESCRIPTIONS****Permit Action 010**

This is a major amendment to replace the coal crushers (EU 005). The new coal crushers (EU 040) are needed due to the age of the existing crushers as well as the need for more finely crushed coal.

The expiration date for the Mercury reporting requirement in SV 001 was removed due to the Vacatur of the Clean Air Mercury Rule. The expiration date was originally included because the facility would have then been submitting reports to EPA and not the MPCA.

The facility's potential to emit was recalculated, and the information in the facility description was updated. Several groups and emission units were reorganized and several requirements and citations were updated to meet current MPCA policy. The National Emission Standards for Hazardous Air Pollutant subpart DDDDD requirements were removed from EU 028 due to the Vacatur of the standard.

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-1**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**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**

<b>What to do</b>	<b>Why to do it</b>
At the present time, the permittee must comply with all the applicable requirements in 40 CFR pt. 97 for a CAIR NOx source, a CAIR SO2 source, a CAIR NOx unit, and a CAIR SO2 unit as defined in 40 CFR Sections 97.102 and 97.202.  If the US Environmental Protection Agency promulgates a rule to stay 40 CFR pt. 97 in Minnesota, this requirement will be of no further force and effect upon the effective date of the rule.	40 CFR pt. 97; 40 CFR Section 52.1240; Minn. R. 7007.0800, subp. 2
A. OPERATIONAL LIMITS	hdr
Permit Appendices: This permit contains appendices as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the appendices.	Minn. R. 7007.0800, subp. 2
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010 - 7009.0080
Truck and hauler unloading stations: Control fugitive particulate emissions from the unloading of coal and petroleum coke from trucks or haulers by dust suppression methods so that emissions from such sources are minimized.	Minn. R. 7011.1105, subp. C
Operating practices: Clean up all coal spilled on roads or access areas as soon as practicable using methods that minimize the amount of dust suspended. Maintain air pollution control equipment in proper operating condition and utilize air pollution control systems as designed.	Minn. R. 7011.1105, subp. I
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Comply with Fugitive Emissions Control Plan: Follow the actions and recordkeeping specified in the Fugitive Emissions Control Plan. The plan may be amended by the Permittee, but must include the minimum fugitive control requirements specified within this permit. Keep records of changes made to the fugitive control plan, including the date and nature of changes made. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2; Minn. R. 7009.0020; Minn. R. 7011.0150
Any stationary internal combustion engines at the facility, including those which qualify as insignificant activities under Minn. R. 7007.1300, must meet the performance standards set out in Minn. R. 7011.2300.	Minn. R. 7011.2300
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O&M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation. Keep records of all changes made to the O&M Plan, including the date and nature of the change.	Minn. R. 7007.0800, subps. 14 & 16(J)
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

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-2**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

Temporary boilers or engines may be brought on site for the purpose of providing steam, heat or electrical power in place of boilers or generators that are temporarily out of operation for less than one year. The temporary units may not be operated at the same time as the permanent units that they are meant to replace, except for up to 8 hours during start-up and shutdown transition periods. Temporary units must have potential emission rates in pounds/hour for all criteria pollutants that are less than permit emission limits and the potential emission rates of the permanent units that they are replacing.	Minn. R. 7007.0800, subp. 2
Temporary engines may be used on site that do not replace existing equipment if the use qualifies as an insignificant activity under Minn. R. 7007.1300, subp. 2(B).	
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, subps. 2 & 16(J)
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	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
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
The permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
<b>B. MONITORING REQUIREMENTS</b>	hdr
Operation of Monitoring Equipment: Unless otherwise noted in Tables A and/or B, monitoring a process or control equipment connected to that process is not required during periods when the process is shutdown, such as for system breakdowns, repairs, calibration checks, and zero and span adjustments (as applicable). Monitoring records should reflect any such periods of process shutdown.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment other than continuous emission and opacity monitors (requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Continuous Operation: 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 CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090
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
<b>C. TESTING REQUIREMENTS</b>	hdr
Performance Test: Conduct all performance tests in accordance with Minn. R. ch. 7017, unless otherwise noted in Tables A or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  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 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy or CD: due 105 days after each Performance Test  The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4; Minn. R. 7017.2035, subps. 1-2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-3**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

CEMS Certification Test Notification and Submittals:  CEMS Certification Test Plan: due 30 days before CEMS Certification Test CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test CEMS Certification Test Report: due 45 days after CEMS Certification Test CEMS Certification Test Report - Microfiche Copy or CD: due 105 days after CEMS Certification Test  The Notification, Test Plan, and Test Report may be submitted in alternate format as allowed by Minn. R. 7017.1120, subp. 2	Minn. R. 7017.1060, subps. 1-3; Minn. R. 7017.1080, subps. 1-4
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
D. DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
These requirements apply if a reasonable possibility (RP) as defined in 40 CFR Section 52.21(r)(6)(vi) exists that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test at Section 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase (SEI). If the ATPA test is not used for the project, or if there is no RP that the proposed project could result in a SEI, these requirements do not apply to that project. The Permittee is only subject to the Preconstruction Documentation requirement for a project where a RP occurs only within the meaning of Section 52.2(r)(6)(vi)(a).  Even though a particular modification is not subject to New Source Review (NSR), or where there isn't a RP that a proposed project could result in a SEI, a permit amendment, recordkeeping, or notification may still be required by Minn. R. 7007.1150 - 7007.1500.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following:  1. Project description 2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the EU could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination.  The Permittee shall maintain records of this documentation.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.1200, subp. 4; Minn. R. 7007.0800, subps. 4 & 5
The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
Before beginning actual construction of any project which includes any electric utility steam generating unit (EUSGU), the Permittee shall submit a copy of the preconstruction documentation (items 1-4 under Preconstruction Documentation, above) to the Agency.	Title I Condition: 40 CFR Section 52.21(r)(6)(ii); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-4**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

For any project which includes any EUSGU, the Permittee must submit an annual report to the Agency, within 60 days after the end of the calendar year. The report shall contain:	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
<p>a. The name and ID number of the facility, and the name and telephone number of the facility contact person</p> <p>b. The quantified annual emissions analyzed using the ATPA test, plus the potential emissions associated with the same project analyzed as part of a hybrid test.</p>	
For any project which does not include any EUSGU, the Permittee must submit a report to the Agency if the annual summed (actual, plus potential used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain:	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
<p>a. The name and ID number of the facility, and the name and telephone number of the facility contact person</p> <p>b. The annual emissions (actual, plus potential if any part of the project was analyzed using the hybrid test) for each pollutant for which the preconstruction projection and significant emissions rate is exceeded.</p> <p>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.</p>	
<b>E. OTHER RECORDKEEPING, NOTIFICATIONS, AND SUBMITTALS</b>	hdr
Recordkeeping and Reporting for Temporary Boilers and Engines: Keep the following records on-site: documentation of hours of operation of the temporary units, a statement for all periods of temporary unit operation that the replaced permanent unit is not also operating, and calculations demonstrating that emissions are less than or equal to emissions from the permanent units being replaced. Notify the Commissioner if temporary and permanent units are operated simultaneously, except as allowed by this permit. Make verbal notification within 2 days, and written notification with the semi-annual deviations report.	Minn. R. 7007.0800, subp. 2
<p>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.</p> <p>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.</p>	Minn. R. 7019.1000, subp 3
<p>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.</p> <p>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.</p>	Minn. R. 7019.1000, subp 2
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
<p>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:</p> <ol style="list-style-type: none"> <li>1. The cause of the deviation;</li> <li>2. The exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. Whether or not the deviation has been corrected;</li> <li>4. The anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	Minn. R. 7019.1000, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-5**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 - 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. ch. 7002
Recordkeeping: Retain all records at the stationary source or at another site where the records are readily accessible 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 strip-chart 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)
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)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
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)
Application for Permit Amendment: If you need a permit amendment, submit 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 - 7007.1500
<b>F. CRITERIA POLLUTANT MODELING</b>	hdr
Parameters Used in Modeling: The parameters used in the PM10 modeling performed for determining emission and/or operational limits are listed in Appendix C of this permit. If the Permittee intends to change any of these parameters, the Permittee must submit the revised parameters to the Commissioner and receive written approval before making any changes. The revised parameter information submittal must include, but is not limited to: the locations, heights and diameters of the stacks; locations and dimensions of nearby buildings; velocity and temperatures of the gases emitted; and the emission rates. The plume dispersion characteristics due to the parameter revisions must equal or exceed the dispersion characteristics modeled for this permit, and the Permittee shall demonstrate this in the proposal.	Minn. R. 7009.0020 (This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act)
Parameters Used in Modeling (continued): If the information does not demonstrate equivalent or better dispersion characteristics, or if a conclusion cannot readily be made about the dispersion, the Permittee must remodel.  For changes that do not involve an increase in PM10 emission rates, and/or that do not require a permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.  For changes involving increases in PM10 emission rates and that require a minor permit amendment, the proposal must be submitted as soon as practicable, but no less than 60 days before making the change to any parameter.  For changes involving increases in PM10 emission rates and that require a permit amendment other than a minor amendment, the proposal must be submitted prior to or with the permit amendment application.	Minn. R. 7009.0020 (This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-6**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** GP 002 Emergency Generators**Associated Items:** EU 013 Emergency Engine Generator 1EEG-GEN-0002

EU 014 Emergency Engine Generator 1EEG-GEN-0003

What to do	Why to do it
A. EMISSION & OPERATING LIMITS	hdr
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . This limit applies individually to each unit listed in GP 002.	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity . Opacity shall not exceed 20% for more than 10 seconds once operating temperatures have been achieved. This limit applies individually to each unit listed in GP 002.	Minn. R. 7011.2300, subp. 1
Operating Hours: less than or equal to 816 hours/year using 12-month Rolling Sum calculated monthly, for the GP 002 generators combined.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Fuel type is limited to distillate oil with a maximum sulfur content of 0.50% by weight.	Minn. R. 7007.0800, subp. 2
B. RECORDKEEPING REQUIREMENTS	hdr
By the last day of each month, record the total hours of operation of GP 002 for the previous month and calculate and record the total hours of operation of GP 002 for the previous 12-month period.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 5
Maintain records showing the sulfur content of all fuel oil combusted in the GP 002 generators.	Minn. R. 7007.0800, subps. 4 & 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-7**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 003 Coal Handling and Coal Yard Traffic - Limited Operation****Associated Items:** FS 002 Petroleum Coke Storage Pile (Inactive, reactivation will require new modeling demonstration)

FS 005 Coal Stacker

FS 006 Coal Silo Unloading

FS 007 Coal Reclaim Hoppers

FS 009 Coal Pile A

FS 010 Coal Pile B

FS 012 Coal Yard Traffic (Unpaved roads &amp; driving on coal)

FS 013 Paved Road Traffic

FS 014 Petroleum Coke Unloading Station (Inactive, reactivation will require new modeling demonstration)

What to do	Why to do it
<p>This requirement applies individually to each source in this group.</p> <p>Stockpiles, stockpile construction and reclaiming:</p> <ol style="list-style-type: none"><li>1. Control fugitive particulate emissions by dust suppression methods on such operations so that fugitive particulate emission are minimized.</li><li>2. In the alternative, use an underground bottom feed (plow) of coal to an underground conveyor system provided the exhaust gases from the enclosed spaces do not contain particulate matter in excess of 0.020 grains per dry standard cubic foot (gr/dscf).</li></ol>	Minn. R. 7011.1105, subps. (F)(1) & (2)
Coal/Coke Handling Operating Hours: Limited to 6:00 a.m. through 8:00 p.m.	Minn. R. 7009.0020
Recordkeeping: The Permittee is required to keep a log of daily Coal/Coke Handling Operating Hours.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-8**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 004 Flite Conveyors (NSPS Subpart Y)****Associated Items:** CE 014 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 016 East Flite Conveyor (AFC-2A)

EU 017 East Flite Conveyor (AFC-2B)

EU 018 West Flite Conveyor (AFC-1A)

EU 019 West Flite Conveyor (AFC-1B)

SV 018 Flite Conveyor Dust Collector

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.020 grains/dry standard cubic foot	Minn. R. 7011.1105, subp. G(1)
Opacity: less than or equal to 20 percent opacity	40 CFR Section 60.252(c); Minn. R. 7011.1150; Minn. R. 7011.1105, subp. G(2)
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot	Minn. R. 7009.0020
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column , unless a new range is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new range is required to be set, it will be based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop of each fabric filter once every 24 hours when in operation.	Minn. R. 7007.0800, subp. 4
B. OPERATIONAL LIMITS	hdr
Air Flow Rate: less than or equal to 16,000 actual cubic feet/minute . The Permittee shall keep the baghouse system design specifications showing the calculated maximum airflow on site.	Minn. R. 7005.0100, subp. 35a
Visible Emissions: The Permittee shall check the fabric filter stack (SV 018) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Minn. R. 7007.0800, subp. 2
C. MONITORING AND RECORDKEEPING	hdr
Monitoring Equipment: The Permittee shall install and maintain necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Recordkeeping of Visible Emissions and Pressure Drop (during inclement weather only): The Permittee shall record the time and date of each visible emission inspection/pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop (during inclement weather only) was within the range specified in the facility's O&M Plan.	Minn. R. 7007.0800, subp. 5
Operation and Maintenance: The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7011.0075, subp. 2
Operation of Control Equipment: The control equipment is considered listed control equipment under Minn. R. 7011.0060 to 7011.0080.  Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by pollution control equipment (CE 014). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-9**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none"> <li>- visible emissions are observed;</li> <li>- the recorded pressure drop is outside the required operating range; or</li> <li>- the fabric filter or any of its components are found during the inspections to need repair.</li> </ul> <p>Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O &amp; M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.</p>	Minn. R. 7007.0800, subps. 4, 5, & 14
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
<p>Initial Performance Test: due 180 days after Initial Startup of EU 017 to measure Opacity. (Note: testing was completed on SV 018 for EU 016 and EU 019 on August 20, 2004.)</p> <p>Performance Test Pre-test Meeting: due 7 days before each performance test.</p>	<p>40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4</p>
<p>Initial Performance Test: due 180 days after Initial Startup of EU 018 to measure Opacity. (Note: testing was completed on SV 018 for EU 016 and EU 019 on August 20, 2004.)</p> <p>Performance Test Pre-test Meeting: due 7 days before each performance test.</p>	<p>40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4</p>
<b>E. NSPS GENERAL PROVISIONS - APPLICABLE TO EU 016, EU 017, EU 018, and EU 019 ONLY</b>	hdr
<p>Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced within 180 days of completion of any physical or operational change subject to the control measures specified in 60.14(a), compliance with all applicable standards must be achieved. (Note: Notifications have been received for EU 016 and EU 019 and construction completed as described in the TSD for Air Emission Permit 16300005-004.)</p>	<p>40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1</p>
<p>Notification of Anticipated Date for Conducting Opacity Observations: due 30 days prior to observation date.</p> <p>(Note: Testing notification for testing on SV 018 for EU 016 and EU 019 was completed on July 20, 2004. Testing was completed on SV 018 for EU 016 and EU 019 on August 20, 2004.)</p>	<p>40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1</p>
<p>Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; 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>Recordkeeping: Maintain a file of all measurements, maintenance, reports and records for at least five years.</p>	<p>40 CFR Section 60.7(f); Minn. R. 7019.0100, subp. 1</p>
<p>Opacity Compliance: Demonstrate compliance with Opacity standards using Reference Method 9.</p>	<p>40 CFR Section 60.11; Minn. R. 7017.2015</p>
<p>No owner or operator shall 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.</p>	<p>40 CFR Section 60.12; Minn. R. 7011.0050</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-10**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 005 Synthetic Minor Fuel Usage Limits****Associated Items:** EU 001 Boiler 1

EU 028 Auxiliary Boiler

What to do	Why to do it
<b>A. EMISSION &amp; OPERATING LIMITS</b>	hdr
The Permittee shall comply with EITHER the Tier 1 limits (all of the limits listed under Tier 1) OR the Tier 2 limits (all of the limits listed under Tier 2). Compliance with either set of limits is adequate, it is not necessary to comply with both sets of limits simultaneously.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
<b>A.1. Tier 1 Limits</b>	hdr
EU028 Natural Gas Fuel Usage: less than or equal to 380.95 million cubic feet/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
EU028 Fuel Oil Fuel Usage: less than or equal to 500,000 gallons/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
<b>A.2. Tier 2 Limits</b>	hdr
Volatile Organic Compounds: less than or equal to 132.7 tons/year using 12-month Rolling Sum for both units listed under GP 005, combined, calculated using Equation B.1 in Appendix B of this permit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Fuel Usage: less than or equal to 1750000 gallons/year using 12-month Rolling Sum of fuel oil used in EU 028, using the following calculation:  $F(028) = 500,000 \text{ gal} + [1,250,000 \text{ gal} \times ((8,760 - \text{HMB})/2,000)]$ <p>where:  HMB = 12-month rolling sum of main boiler (EU 001) operating hours during which EU 003, EU 005, EU 010, and EU 016 are also presumed to be operating.</p> <p>(Recordkeeping is not required if the 12-month Rolling Sum of fuel oil used in EU 028 is less than 500,000 gal.)</p>	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
<b>B. RECORDKEEPING</b>	hdr
Maintain paper or electronic copies, for a period of 5 years, of the applicable records below.	Minn. R. 7007.0800, subp. 5
<b>B.1 Tier 1 Recordkeeping Requirements</b>	hdr
Each day, record the quantity and heat content of each type of fuel combusted in EU 028.  Or  Be able to extract that information for each day of the previous month, based on operating records, by the 15th day of each month.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
By the 15th day of each month, calculate and record the 12-month rolling sum of fuel oil combusted in EU 028, for the previous 12 months.	Minn. R. 7007.0800, subps. 4 & 5
By the 15th day of each month, calculate and record the 12-month rolling sum of natural gas combusted in EU 028, for the previous 12 months.	Minn. R. 7007.0800, subps. 4 & 5
<b>B.2 Tier 2 Recordkeeping Requirements</b>	hdr
Each day, record the operating hours for EU 001, and the number of those hours during which EU 003, EU 005, EU 010, and/or EU 016 were also operating (HMB). (Recordkeeping is not required if the 12-month Rolling Sum of fuel oil used in EU 028 is less than 500,000 gal.)	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Each day, record the quantity and heat content of each type of fuel combusted in each of the 2 units listed in GP 005.  OR  Be able to extract that information for each day of the previous month, based on operating records, by the 15th day of each month.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-11**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

By the 15th day of each month, calculate and record the following:  - The monthly and 12-month rolling sum of the main boiler (EU 001) operating hours during which EU 003, EU 005, EU 010, and/or EU 016 were also operating. (Recordkeeping is not required if the 12-month Rolling Sum of fuel oil used in EU 028 is less than 500,000 gal.)  - The monthly and 12-month rolling sum of the EU 028 fuel oil usage using the equation specified within the Tier 2 limit.	Minn. R. 7007.0800, subps. 4 & 5
By the 15th day of each month, calculate and record the monthly and 12-month rolling sum of VOC emissions, using the calculation method described within the Tier 2 limit.	Minn. R. 7007.0800, subps. 4 & 5



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-12**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** GP 007 Lime Handling & Storage**Associated Items:** EU 032 Lime Silo Day Bin

EU 033 Lime Storage Silo

What to do	Why to do it
A. EMISSION AND OPERATING LIMITS	hdr
Total Particulate Matter: less than or equal to 0.010 grains/dry standard cubic foot . This limit applies individually to each unit listed in GP 007. This limit also satisfies the limit of 0.30 grains per dry standard cubic foot specified in Minn. R. 7011.0715, subp 1(A).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0715, subp. 1(A)
Particulate Matter < 10 micron: less than or equal to 0.010 grains/dry standard cubic foot . This limit applies individually to each unit listed in GP 007. This limit also satisfies the limit of 0.30 grains per dry standard cubic foot specified in Minn. R. 7011.0715, subp 1(A).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Operating Hours: less than or equal to 5,096 hours/year using 12-month Rolling Sum for each unit listed in GP 007.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
B. CONTROL REQUIREMENTS - see GP 009	hdr
C. RECORDKEEPING REQUIREMENTS	hdr
Daily Recordkeeping: Each day, record the total number of hours that each unit listed under GP 007 operated during the previous day.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monthly Recordkeeping: By the 15th day of each month, calculate and record the total number of hours each unit in GP 007 operated during the previous month, and during the previous 12 months.	Minn. R. 7007.0800, subp. 4 & 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-13**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 008 FGD Byproduct/Fly Ash Handling & Storage****Associated Items:** EU 012 Ash Silo

EU 034 FGD Byproduct/Fly Ash Storage Silo

EU 035 Recycle Ash Storage Silo

EU 036 Recycle Ash Storage Silo

EU 037 Economizer Ash Surge Hopper

EU 039 SCR Inlet Ash Surge Hopper

What to do	Why to do it
A. EMISSION AND OPERATING LIMITS	hdr
Total Particulate Matter: less than or equal to 0.010 grains/dry standard cubic foot . This limit applies individually to each unit listed in GP 008. This limit also satisfies the limit of 0.30 grains per dry standard cubic foot specified in Minn. R. 7011.0715, subp 1(A).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0715, subp. 1(A)
Particulate Matter < 10 micron: less than or equal to 0.010 grains/dry standard cubic foot . This limit applies individually to each unit listed in GP 008. This limit also satisfies the limit of 0.30 grains per dry standard cubic foot specified in Minn. R. 7011.0715, subp 1(A).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL REQUIREMENTS - see GP 009	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-14**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 009 Lime, FGD Byproduct/Fly Ash Fabric Filters****Associated Items:** CE 018 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 019 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 020 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 021 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 022 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 023 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 026 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 027 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

What to do	Why to do it
A. OPERATING REQUIREMENTS	hdr
The Permittee shall operate and maintain each fabric filter at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
The Permittee shall operate and maintain each fabric filter in accordance with the Operation and Maintenance (O&M) Plan. The Permittee shall keep copies of the O&M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column, unless a new range is required to be set pursuant to Minn. R. 7017.2025, subp. 3. If a new range is required to be set, it will be based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop of each fabric filter once every 24 hours when in operation.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
B. RECORDKEEPING AND MONITORING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop: The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5 & 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - Visible emissions are observed; - The recorded pressure drop is outside the required operating range; or - The fabric filter or any of its components are found during the inspections to need repair.  Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subps. 4, 5 & 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-15**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: GP 010 Areas Served by Watering Truck****Associated Items:** CE 013 Water Application - truck

FS 002 Petroleum Coke Storage Pile (Inactive, reactivation will require new modeling demonstration)

FS 009 Coal Pile A

FS 010 Coal Pile B

FS 011 Coal/Coke Reclaim

FS 012 Coal Yard Traffic (Unpaved roads &amp; driving on coal)

FS 013 Paved Road Traffic

What to do	Why to do it
Access areas, roads, parking facilities (1) Install asphalt or concrete surfaces or chemical agents on all active truck haul roads of the coal handling facility when the coal throughput by truck is 200,000 tons or greater. All paved roads and areas shall be cleaned to minimize the discharge to the atmosphere of fugitive particulate emissions. Such cleaning shall be accomplished in a manner which minimizes resuspension of particulate matter. Access areas surrounding coal stockpiles and parking facilities which are located within a coal handling facility shall be treated with water, oils, or chemical agents.	Minn. R. 7011.1105, subp. (A)
The Permittee shall water the unpaved roads (including all routes where vehicles are driven on coal) at the facility. Watering shall comply with the following conditions: a. The water application rate shall be at least 3 gallons for each 100 square feet every 24 hours. b. A rainfall of at least 0.1 inch during the previous 24 hours shall substitute for one water application, unless the storage pile moisture content is rated as "dry." c. If unpaved roads cannot be watered because the ambient air temperature (as measured at the facility during daylight operating hours) will be less than 35 degrees F (1.7C) or conditions due to weather, in combination with the application of water, could create hazardous driving conditions, then watering shall be postponed and accomplished as soon as the conditions preventing water application have abated.	Minn. R. 7009.0020 (This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act)
d. Water application is not required on days when there is no vehicle traffic. e. Water application is not required when the daily qualitative assessment of the moisture content of the coal piles is "wet." f. Following any day when water is not applied based on the absence of traffic, water shall be applied within 3 hours of commencement of vehicle traffic, unless another criterion for not watering is met.	Minn. R. 7009.0020 (cont. from above) (This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act)
Daily Recordkeeping: The Permittee shall keep records of the water applications, including the following: a. The daily qualitative assessment of the moisture content of coal piles where vehicles are driven. b. The roads watered, the amount of water applied, the time watered, and the method of application. If water was not applied because there was a 0.1 inch or greater rainfall within the previous 24 hours, or because of the temperature or other weather conditions that would result in unsafe driving conditions, it must be noted in the record along with the source of measurement (i.e. on-site rain gauge or thermometer). c. Records of watering equipment breakdowns and repairs, and records of contingency efforts undertaken.	Minn. R. 7007.0800, subps. 4 & 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-16**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: SV 001 Main Boiler Stack****Associated Items:** EU 001 Boiler 1

What to do	Why to do it
A. MONITORING REQUIREMENTS	hdr
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; Minn. R. 7017.1020
Linearity and Leak Check Test (Acid Rain Program): due before end of each calendar quarter starting 07/21/1998. Conduct a quarterly linearity test on CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B.	40 CFR pt. 75, Appendix B, Section 2.2; Minn. R. 7017.1020
CENS Relative Accuracy Test Audit (RATA): due before end of each calendar half-year starting 07/21/1998. Conduct a RATA on all CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B. If the RATA results indicate a relative accuracy of 7.5% or less, the next RATA is not required for twelve (12) months.	40 CFR pt. 75, Appendix B, Section 2.3; Minn. R. 7017.1020
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA)	Minn. R. 7007.0800, subp. 2
CEMS QA/QC: The owner or operator of an affected facility shall operate, calibrate, and maintain each CEMS according to the QA/QC procedure in 40 CFR pt. 75, Appendix B as amended.	40 CFR Section 75.21; Minn. R. 7017.1020
Emissions Monitoring: The owner or operator shall measure SO <sub>2</sub> , NO <sub>x</sub> , CO <sub>2</sub> , and Hg emissions, and exhaust gas flow rate, for each affected unit in accordance with 40 CFR Section 75.10.	40 CFR pt. 75; Minn. R. 7017.1020
COMS Continuous Operation: Except for system breakdowns, repairs, calibration checks, and zero and span adjustments, all COMS shall be in continuous operation.	Minn. R. 7007.0800, subp. 2
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily during periods of operation. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specifications of PS-1 of 40 CFR pt. 60, Appendix B.	Minn. R. 7017.1000
COMS Calibration Error Audit: due before end of each calendar half-year starting 06/23/2004. Conduct audits at least 3 months apart but no greater than 8 months apart.	Minn. R. 7007.0800, subp. 2
The Report for COMS Calibration Error Audit: due 30 days after end of each calendar half-year following COMS Certification Test	Minn. R. 7007.0800, subp. 2
COMS Monitoring Data: Calculate each six-minute average period as follows: total the opacity values of each individual data point collected by the COMS for each one-minute period and divide the total by the number of data points. (The sum of the individual one-minute averages in the applicable averaging period must be determined and divided by the number of one-minute averages taken.) Round the resulting averages to the nearest one percent opacity. This resulting average is the six-minute opacity that shall be recorded by the monitoring system. There are ten individual six-minute consecutive averaging periods in each hour beginning on the clock hour and ending six minutes later.	Minn. R. 7017.1200, subp. 3
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five (5) years from the date of the monitoring sample, measurement or report. Records must be kept as required in Table A under the "Total Facility" subject item.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-17**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 001 Boiler 1

**Associated Items:** CE 001 Electrostatic Precipitator - High Efficiency  
CE 002 Electrostatic Precipitator - High Efficiency  
CE 015 SCR (Selective Catalytic Reduction)  
CE 016 Spray Dryer  
CE 017 Fabric Filter - High Temperature, i.e., T>250 Degrees F  
GP 005 Synthetic Minor Fuel Usage Limits  
MR 004 Flow Monitor  
MR 006 SO2 Analyzer  
MR 007 NOX Analyzer  
MR 008 CO2 Analyzer  
MR 009 Opacity Monitor  
MR 010 Hg CEMS  
SV 001 Main Boiler Stack

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.40 lbs/million Btu heat input using 3-hour Average . This limit applies prior to the boiler rehabilitation.	Minn. R. 7011.0510, subp. 1
Total Particulate Matter: less than or equal to 0.015 lbs/million Btu heat input using 3-hour Average at the stack exit using Method 5, excluding condensable particulate matter as allowed under Minn. R. 7017.2060, subp. 3(c).  Heat Input is defined as the total input (fuel basis) of EU 001.  This limit does not apply when the flue gas temperature is less than 190 degrees F at the inlet of CE017.  This limit becomes effective 270 days after the 1st firing of the boiler with fuels other than natural gas following the rehabilitation project.	Title I Condition: To avoid classification as a major mod under 40 CFR Section 52.21; Minn. R. 7007.3000; Meets Minn. R. 7011.0510, subp. 1
Particulate Matter < 10 micron: less than or equal to 0.030 lbs/million Btu heat input using 3-hour Average at the stack exit, as measured using test methods 201A and 202 as amended and using any and all options allowed within the test methods, or other test method approved in advance by the Commissioner as allowed under Minn. R. 7017.2050.  Heat Input is defined as the total input (fuel basis) of EU 001.  This limit does not apply when the flue gas temperature is less than 190 degrees F at the inlet of CE017.  This limit becomes effective 36 months after the 1st firing of the boiler with fuels other than natural gas following the rehabilitation project.	Title I Condition: To avoid classification as a major mod under 40 CFR Section 52.21; Minn. R. 7007.3000
Sulfur Dioxide: less than or equal to 0.12 lbs/million Btu heat input using 30-day Rolling Average at the stack exit.  Heat Input is defined as the total heat input (CEMS basis) of EU 001.  This limit becomes effective 450 days after the 1st firing of the boiler with fuels other than natural gas following the rehabilitation project.	Title I Condition: To avoid classification as a major mod under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633); Minn. R. 7007.3000; Meets Minn. R. 7011.0510, subp. 1
Sulfur Dioxide: less than or equal to 1.60 lbs/million Btu heat input calculated as an annual average. By January 30th of each year, compute the annual average sulfur dioxide emission rate during the previous calendar year by averaging all hourly averages recorded over the previous calendar year. Determine hourly averages from data collected in accordance with 40 CFR pt. 75, subp. B, or using the missing data substitution procedures as set out in 40 CFR pt. 75, subp. D.	Minn. R. 7021.0050, subp. 5
Sulfur Dioxide: less than or equal to 3.0 lbs/million Btu heat input using 1-Hour Average	Minn. R. 7009.0020 (This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-18**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

Nitrogen Oxides: less than or equal to 0.10 lbs/million Btu heat input using 30-day Rolling Average at the stack exit.  Heat Input is defined as the total heat input (CEMS basis) of EU 001.	Title I Condition: To avoid classification as a major mod under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633); Minn. R. 7007.3000;
Opacity: less than or equal to 20 percent opacity using 6-minute Average except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
<b>B. OPERATIONAL &amp; CONTROL REQUIREMENTS</b>	hdr
Allowed fuel types: bituminous and subbituminous coal, petroleum coke, wood, natural gas, used oil, non-hazardous petroleum-contaminated cleanup material, nonhazardous MGP waste, and cellulose-based, non-chlorinated, nonhazardous organic materials, including but not limited to paper and grain.  Manufactured Gas Plant (MGP) waste is defined as tar-contaminated materials and gas purification residuals associated with past operation of gas manufacturing plants. MGP waste includes non-hazardous materials such as contaminated soils, sediments, oxide box filler material, and wood chips.	Minn. R. 7007.0800, subp. 2
Except as provided below, the Permittee shall operate and maintain the control devices listed above under "Associated Items" at all times that any emission unit controlled by the control equipment is in operation. See also Subject Items CE 015, CE 016, and CE 017 for further requirements.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
Operation of CE001 and CE002 is not required except during times when the flue gas temperature is less than 190 degrees F at the inlet of the fabric filter (CE017). The permittee shall operate and maintain CE 017 at all times that any source of emissions controlled by the fabric filter is in operation and the flue gas temperature is greater than or equal to 190 degrees F at the inlet of CE017.	Minn. R. 7007.0800, subp. 2
<b>C. BOILER OPERATING RATE REQUIREMENTS AND LIMITS</b>	hdr
Boiler Feed Water flow rate: less than or equal to 3828000 lbs/hour using 8-hour Block Average	Minn. R. 7017.2025, subp. 3 (Notice of Compliance for 10/21/98 performance test) (this requirement expires upon 1st firing of the boiler following rehabilitation)
Each calendar day, calculate the previous day's 8-hour block average boiler feed water flow rates by dividing the total boiler feed water flow during the 8 hours by the total operating time during the 8 hours. Downtime of 15 minutes or more is not to be included in the operating time.  The Boiler Feed Water Flow Rate may be exceeded for up to 40 hours per year under the STET limit, below.	Minn. R. 7007.0800, subps. 2 & 5
Boiler Alternative Operating Conditions for Performance Testing: Alternative Operating Conditions during testing are defined as 90% to 100% of the boiler's normal dependable operating load or the short-term maximum permitted operating rate, whichever is lower. The basis for this number must be included in the test plan. If testing is conducted at the alternative operating condition established, an operating limit will not be established as a result of performance testing.  In no case will the new operating limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subps. 2(A) & 3(B)
Boiler Operating Conditions Not Meeting the Defined Operating Conditions During Performance Testing:  If performance testing is not conducted at or above the established alternative operating condition, then the boiler operating rate will be limited on an 8-hour block average based on the following:  1. If the results of the performance test are greater than 80% of any applicable emission limit for which emissions are measured, then boiler operation will be limited to the tested operating rate. 2. If results are less than 80% of all applicable emission limits for which emissions are measured, boiler operation will be limited to 110% of the tested operating rate.  In no case will the new operating limit be higher than allowed by an existing permit condition.	Minn. R. 7017.2025, subp. 3(B)
Short Term Emergency and Testing (STET) Operating Hours Limit: The boiler may operate up to 40 hours per year to demonstrate the Uniform Rating of Generating Equipment (URGE) capacity and to meet emergency energy supply needs. Documentation of all STET operation shall be maintained. The boiler must meet emission limits during STET operation.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-19**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

<p>STET Operation Definition that Applies to Boilers that Meet or do Not Meet the Alternative Operating Condition for Performance Testing:</p> <p>If performance test results measure emissions at 80% or less of any applicable emission limits for any tested pollutant, STET operation is defined as operation beyond 110% of the average operating rate achieved during that performance test.</p> <p>If performance test results measure emissions at greater than 80% any applicable emission limit for any tested pollutant, STET operation is defined as operation beyond 100% of the average operating rate achieved during that performance test.</p> <p>In no case will STET operation be higher than allowed by an existing permit condition.</p>	Minn. R. 7007.0800, subp. 2
<b>D. MONITORING REQUIREMENTS</b>	hdr
Use the SO2 CEM to measure SO2 emissions.	40 CFR Section 64.3; Minn. R. 7017.1000, subp. 1
Use the NOX CEM to measure NOX emissions.	40 CFR Section 64.3; Minn. R. 7017.1000, subp. 1
Use the COM to measure opacity emissions in 1-minute averages as required in Minn. R. 7017.1200, subp. 3.	Minn. R. 7017.1200, subp. 3
Emissions Monitoring: Measure SO2, NOx, CO2, and Hg emissions, and exhaust gas flow rate, for each affected unit in accordance with 40 CFR Section 75.10.	40 CFR pt. 75; Minn. R. 7017.1020
Emissions Monitoring: The owner or operator shall use a Hg CEMS to measure Hg emissions from EU 001. Additional Hg monitoring requirements are located under subject item SV 001, MR 010, and Total Facility.	Minn. Stat. 216B.681; Minn. R. 7017.1006
<b>E. REQUIREMENTS FOR BURNING WASTE OR FUELS OTHER THAN COAL, WOOD, PETROLEUM COKE, OR NATURAL GAS</b>	hdr
The feed rate of MGP waste must not exceed 2 percent of total fuel mass (total fuel mass includes the mass of MGP waste used as fuel). The combined feed rate of MGP waste, used oil, petroleum-contaminated materials, and any fuels other than coal, wood, petroleum coke, and natural gas must not exceed 5 percent of total fuel mass (total fuel mass includes the mass of all other fuels in addition to coal, wood, petroleum coke, and natural gas), and a mercury analysis of the fuel must also be done.	Minn. R. 7007.0800, subp. 2
<p>Monitoring and Recordkeeping: When combusting MGP waste, used oil, petroleum-contaminated materials, or any other fuels other than coal, wood, petroleum coke and natural gas, monitor and record the following:</p> <ol style="list-style-type: none"> <li>1. The daily quantity, by weight, of MGP waste, used oil, petroleum-contaminated materials, or any other fuels mixed with coal, once each day; and</li> <li>2. Boiler operating load once each hour in pounds of steam per hour.</li> </ol>	Minn. R. 7007.0800, subp. 2
<p>Minimum Operating Load: Operate EU 001 at 50% or greater capacity when combusting MGP waste, used oil, petroleum-contaminated materials, or any other fuels other than coal, wood, petroleum coke, and natural gas, except that up to 2,000 pounds of on-site generated petroleum-contaminated rags may be placed in the boiler prior to startup.</p> <p>If EU 001 undergoes an emergency shutdown or emergency load reduction to below 50% capacity, immediately cease adding MGP waste, used oil, petroleum-contaminated materials, or any fuels other than petroleum coke, wood, or natural gas to the coal, until EU 001 again achieves 50% capacity. Fuels already mixed with coal and enroute to the boiler prior to the emergency may be burned after the emergency with EU 001 operating at less than 50% capacity. The permittee must take all feasible and prudent steps to minimize the amount of coal mixed with other fuels, except as allowed above, which are combusted when EU 001 operates at less than 50% capacity.</p>	Minn. R. 7007.0800, subp. 2
Manage MGP waste in accordance with a MGP Waste Management Plan which has been reviewed and approved by the Commissioner. The plan must specify how NSP will ensure that the waste is non-hazardous, how MGP waste will be delivered, stored, and transported on-site from storage to the boiler, the methods which will be used to track and ensure compliance with the maximum feed rate limit and minimum oxygen limit, and how the Permittee will ensure that optimum combustion conditions are maintained. Submit any proposed changes of the MGP Waste Management Plan to the Commissioner for review and approval prior to implementing the changes.	Minn. R. 7007.0800, subp. 2



**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-20**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

Do not combust waste from an MGP cleanup site unless treatment and disposal via combustion in a utility boiler is the chosen management alternative approved by the Commissioner for that site, after considering the recommendations from the MGP Remediation Advisory Committee. Notify the Commissioner at least 7 days prior to receiving MGP waste from a cleanup site from which waste has not been previously burned at the King Plant. Include in the notification the name and location of the MGP cleanup site and the name and date of the document or documents which identify the MGP waste management alternatives and the approved alternative for the site.	Minn. R. 7007.0800, subp. 2																
<p>The concentration of the pollutants listed below in MGP waste, as measured in accordance with the approved MGP Waste Management Plan, must not exceed the following limits:</p> <table> <tr> <th>Pollutant</th><th>Limit (ppm)</th></tr> <tr> <td>Arsenic</td><td>12</td></tr> <tr> <td>Cadmium</td><td>20</td></tr> <tr> <td>Chromium</td><td>100</td></tr> <tr> <td>Mercury</td><td>1</td></tr> <tr> <td>Lead</td><td>100</td></tr> <tr> <td>Selenium</td><td>20</td></tr> <tr> <td>Silver</td><td>100</td></tr> </table>	Pollutant	Limit (ppm)	Arsenic	12	Cadmium	20	Chromium	100	Mercury	1	Lead	100	Selenium	20	Silver	100	Minn. R. 7007.0800, subp. 2
Pollutant	Limit (ppm)																
Arsenic	12																
Cadmium	20																
Chromium	100																
Mercury	1																
Lead	100																
Selenium	20																
Silver	100																
Comply with Minn. R. ch. 7045 for management of used oil. Maintain on-site records which demonstrate that used oil is managed as required by Minn. R. ch. 7045.	Minn. R. 7007.0800, subp. 2																
Combustion rate limit for petroleum-contaminated waste materials: Do not combust more than 1000 cubic yards per week of soils, sorbents, wood and other nonhazardous combustible materials contaminated with petroleum products. This does not include MGP waste.	Minn. R. 7007.0800, subp. 2																
<b>F. ACID RAIN PROGRAM REQUIREMENTS</b>	hdr																
Hold allowances as of the allowance transfer deadline, in the unit's compliance subaccount, not less than the total annual emissions of sulfur dioxide for the previous calendar year. Takes effect January 1, 2000. Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.	40 CFR Section 72.9(c)(1)(i); 40 CFR Section 72.9(g)(4)																
Comply with the applicable Acid Rain emissions limitation for sulfur dioxide. Takes effect January 1, 2000.	40 CFR Section 72.9(c)(1)(ii); 40 CFR Section 72.9(g)(4)																
<p>NOx Averaging Plan (2002-2006)</p> <p>Beginning January 1, 2000 either:                      Maintain an annual average NOx emission rate of 1.05 lbs/MMBtu and limit the annual heat input to less than or equal to 34,000,000 MMBtu per year.                      OR                      Maintain a Btu-weighted annual average emission rate in lbs/MMBtu, averaged over the units specified in the NOx averaging plan, that is less than or equal to the Btu-weighted annual average emission rate averaged over the same units had they each been operated during the same period of time in compliance with the applicable emission limitations in 40 CFR Sections 76.5, 76.6, or 76.7. Units covered in the plan are:</p> <table> <tr> <th>Plant</th><th>Boiler ID#</th></tr> <tr> <td>Allen S. King</td><td>1</td></tr> <tr> <td>Black Dog</td><td>3,4</td></tr> <tr> <td>High Bridge</td><td>3,4,5,6</td></tr> <tr> <td>Minnesota Valley</td><td>4</td></tr> <tr> <td>Riverside</td><td>6,7,8</td></tr> <tr> <td>Sherburne County</td><td>1,2,3</td></tr> </table>	Plant	Boiler ID#	Allen S. King	1	Black Dog	3,4	High Bridge	3,4,5,6	Minnesota Valley	4	Riverside	6,7,8	Sherburne County	1,2,3	40 CFR Section 76.11; Minn. R. 7011.0553		
Plant	Boiler ID#																
Allen S. King	1																
Black Dog	3,4																
High Bridge	3,4,5,6																
Minnesota Valley	4																
Riverside	6,7,8																
Sherburne County	1,2,3																
Certify Acid Rain Program submittals. Each submission under the Acid Rain Program shall be submitted, signed, and certified by the designated representative or the alternative designated representative for all sources on behalf of which the submission is made in accordance with 40 CFR Section 72.21.	40 CFR Section 72.21; 40 CFR Section 72.22																
Apply for Acid Rain Program Permit reissuance: The designated representative shall submit a complete Acid Rain permit application for each source with an affected unit at least 6 months prior to the expiration of an existing Acid Rain Permit in accordance with 40 CFR Section 72.30(c).	40 CFR Section 72.30(c)																

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-21**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

Keep on site or readily accessible at another site each of the following documents for a period of 5 years from the date the document is created: - The certificate of representation, - All emission monitoring information, - Copies of all reports, compliance certifications, and other submissions or records made under the Acid Rain Program, and - Copies of all documents used to complete an acid rain permit application.	40 CFR Section 72.9(f)(1)
G. MERCURY	hdr
Daily Sampling: Each day starting within 90 days of the first firing of the rehabilitated boiler with solid fuels, the Permittee shall collect a sample of the as-burned solid fuel blend and a sample of flyash, for the purpose of determining the mercury content of each and establishing baseline mercury emission levels.  This requirement expires on the earlier of: (1) Five years after initial startup of EU 001 after rehabilitation, or (2) The date a mercury CEMS is state certified.  This is a state only requirement and is not enforceable by the EPA administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633)
Quarterly Composite Samples: Once each calendar quarter, create a composite sample of as-burned fuel blend and of flyash, from the daily samples collected during the previous calendar quarter. The purpose of this is to determine the mercury content of each and establish baseline mercury emission levels.  This requirement expires on the earlier of: (1) Five years after initial startup of EU 001 after rehabilitation, or (2) The date a mercury CEMS is state certified.  This is a state only requirement and is not enforceable by the EPA administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633)
Establish Baseline Mercury Emission Rate: Use mercury contents of the as-burned fuel blend and flyash, in conjunction with results of mercury emission testing, to establish the baseline mercury emission rate.  This requirement expires on the earlier of: (1) Five years after initial startup of EU 001 after rehabilitation, or (2) The date a mercury CEMS is state certified.  This is a state only requirement and is not enforceable by the EPA administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633)
H. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Test: due before end of each year starting 05/09/2008 to measure total particulate matter emissions. Record and submit a summary of data collected simultaneously by the COM for each PM test run.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 1,095 days after Initial Startup to measure PM10 emissions. Record and submit a summary of data collected simultaneously by the COM for each PM10 test run. ("Initial Startup" in this case refers to the first firing of the boiler with fuels other than natural gas following rehabilitation.)	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 270 days after Initial Startup to measure mercury emissions. ("Initial Startup" in this case refers to the first firing of the boiler with fuels other than natural gas following rehabilitation.)	Minn. R. 7017.2020, subp. 1; Minn. R. 7007.0800, subp. 4 (PUC order approving MERP, March 8, 2004, Docket No. E-002/M-02-633)
Start-up is defined as all EU operation at less than 250 MW. EU 001 startup ends no later than 15 minutes after EU 001 attains 250 MW.  Shutdown is defined as all EU 001 operation at less than 250 MW that is part of the process that terminates EU 001 fuel combustion until the next EU 001 startup. Shutdown does not include temporary operating loads below 250 MW for up to 15 consecutive minutes, due to external factors.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-22**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 003 Coal Gallery**Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 003 Coal Gallery

What to do	Why to do it
A. EMISSION & OPERATING LIMITS	hdr
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent, then action must be taken to control exhaust gases so that either:  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	Minn. R. 7011.1105, subp. (G)
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by pollution control equipment (CE 003). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2
B. CONTROL EQUIPMENT REQUIREMENTS	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 003) once each calendar week while EU 003 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: If visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through CE 003.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-23**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 004 Transfer House 1**Associated Items:** CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 005 Dust Suppression by Water Spray

SV 004 Transfer House 1

What to do	Why to do it
<b>A. EMISSION &amp; OPERATING LIMITS</b>	hdr
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent, then action must be taken to control exhaust gases so that either:  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	40 CFR Section 60.252(c); Minn. R. 7011.1105, subp. (G)
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Operating Hours: less than or equal to 5,096 hours/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Do 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.	40 CFR Section 60.12; Minn. R. 7011.0050
<b>B. CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 004) once each calendar week, while EU 004 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: If visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through CE 004.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5
Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by the pollution control equipment (CE 004). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2
<b>C. RECORDKEEPING REQUIREMENTS</b>	hdr
Daily Recordkeeping: Each day, record the hours of operation of the emissions unit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monthly Recordkeeping: By the 15th day of each month, calculate and record the 12-month rolling sum of hours operated during the previous 12 months.	Minn. R. 7007.0800, subps. 4 & 5
Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperable.	40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1
<b>D. TESTING REQUIREMENTS</b>	hdr
Performance Test: due before end of each 60 months starting 08/09/2007 of the modified conveyors to measure opacity.	40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4
Notification of any physical change or operational change which increases emissions rate: due 60 days (or as soon as practicable) before the change is commenced. Within 180 days of completion of any physical or operational change subject to the control measures specified in 40 CFR Section 60.14(a), compliance with all applicable standards must be achieved.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
Notification of the Date Construction Began: due 60 days before start of construction (or as soon as practicable) of replacements. Submit the name and number of each unit and the date of construction of the replacement parts of each unit.	40 CFR Section 60.15(d); Minn. R. 7019.0100, subp. 1
Notification of Anticipated Date for Conducting Opacity Observations: due 30 days prior to observation date.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-24**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: EU 006 Railcar Unloading****Associated Items:** CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 008 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 009 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

SV 006 Railcar Unloading

SV 007 Railcar Unloading

What to do	Why to do it
A. EMISSION & OPERATING LIMITS	hdr
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent, then action must be taken to control exhaust gases so that either:  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	40 CFR Section 60.252(c); Minn. R. 7011.1105, subp. (G)
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Operating Hours: less than or equal to 5,096 hours/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Do 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.	40 CFR Section 60.12; Minn. R. 7011.0050
B. CONTROL EQUIPMENT REQUIREMENTS	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 007, CE 008, and CE 009) once each calendar week, while EU 006 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: If visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through CE 007, CE 008, or CE 009.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5
C. RECORDKEEPING REQUIREMENTS	hdr
Daily Recordkeeping: Each day, record the hours of operation of the emissions unit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monthly Recordkeeping: By the 15th day of each month, calculate and record the 12-month rolling sum of hours operated during the previous 12 months.	Minn. R. 7007.0800, subps. 4 & 5
Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperable.	40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1
D. TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 08/09/2007 of the modified conveyors to measure opacity of SV006 and SV 007.	40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4
Notification of any physical change or operational change which increases emissions rate: due 60 days (or as soon as practicable) before the change is commenced. Within 180 days of completion of any physical or operational change subject to the control measures specified in 40 CFR Section 60.14(a), compliance with all applicable standards must be achieved.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
Notification of the Date Construction Began: due 60 days before start of construction (or as soon as practicable) of replacements. Submit the name and number of each unit and the date of construction of the replacement parts of each unit.	40 CFR Section 60.15(d); Minn. R. 7019.0100, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

Notification of Anticipated Date for Conducting Opacity Observations: due 30 days prior to observation date.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
--	---

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-26**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 010 Transfer House 2**Associated Items:** CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 011 Transfer House 2

What to do	Why to do it
A. EMISSION & OPERATING LIMITS	hdr
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent, then action must be taken to control exhaust gases so that either:  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	Minn. R. 7011.1105, subp. (G)
Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by pollution control equipment (CE 011). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2
B. CONTROL EQUIPMENT REQUIREMENTS	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 011) once each calendar week, while EU 010 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: If visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through CE 011.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-27**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 011 Transfer House 5**Associated Items:** CE 012 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 012 Transfer House 5

What to do	Why to do it
<b>A. EMISSION &amp; OPERATING LIMITS</b>	hdr
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent, then action must be taken to control exhaust gases so that either  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	40 CFR Section 60.252(c); Minn. R. 7011.1105, subp. (G)
Particulate Matter < 10 micron: less than or equal to 0.0080 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Operating Hours: less than or equal to 5,096 hours/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Do 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.	40 CFR Section 60.12
<b>B. CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 012) once each calendar week, while EU 011 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: If visible emissions (VEs) are observed, determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through CE 012.	Minn. R. 7007.0800, subp. 2
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5
Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by the pollution control equipment (CE 012). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2
<b>C. RECORDKEEPING REQUIREMENTS</b>	hdr
Daily Recordkeeping: Each day, record the hours of operation of the emissions unit.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monthly Recordkeeping: By the 15th day of each month, calculate and record the 12-month rolling sum of hours operated during the previous 12 months.	Minn. R. 7007.0800, subps. 4 & 5
Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperable.	40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1
<b>D. TESTING REQUIREMENTS</b>	hdr
Performance Test: due before end of each 60 months starting 08/09/2007 of the modified conveyors to measure opacity.	40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4
Notification of any physical change or operational change which increases emissions rate: due 60 days (or as soon as practicable) before the change is commenced. Within 180 days of completion of any physical or operational change subject to the control measures specified in 40 CFR Section 60.14(a), compliance with all applicable standards must be achieved.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
Notification of the Date Construction Began: due 60 days before start of construction (or as soon as practicable) of replacements. Submit the name and number of each unit and the date of construction of the replacement parts of each unit.	40 CFR Section 60.15(d); Minn. R. 7019.0100, subp. 1
Notification of Anticipated Date for Conducting Opacity Observations: due 30 days prior to observation date.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-28**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 028 Auxiliary Boiler**Associated Items:** GP 005 Synthetic Minor Fuel Usage Limits

SV 002 Auxiliary Boiler Stack

What to do	Why to do it
A. EMISSION & OPERATING LIMITS (see also GP 005)	hdr
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input or, as an alternative, sulfur content of fuel shall not exceed 0.5 percent by weight. These limits apply at all times, including periods of startup, shutdown, or malfunction.	40 CFR Section 60.42c(d); 40 CFR Section 60.42c(i); Minn. R. 7011.0570
Opacity: less than or equal to 20 percent opacity using 6-minute Average , except for one 6-minute period per hour of not more than 27 percent opacity. This limit does not apply during periods of startup, shutdown, or malfunction.	40 CFR Section 60.43c(c); Minn. R. 7011.0570
Fuel Usage: limited to natural gas and distillate fuel oil	Minn. R. 7007.0800, subp. 2
B. MONITORING & RECORDKEEPING REQUIREMENTS (see also GP005)	hdr
The Permittee shall obtain a supplier certification for each shipment of fuel oil received, showing the sulfur content of the shipment or showing less than 0.5% sulfur content. The certification shall include the name of the oil supplier and a statement that the oil complies with the definition of distillate oil.	40 CFR Section 60.44c(h); 40 CFR Section 60.48c(f); Minn. R. 7011.0570
Recordkeeping: By the last day of each month, record the amount of each fuel combusted during the previous month in EU 028. Records may be in the form of fuel bills or meter readings.	40 CFR Section 60.13(i) and February 20, 1992, EPA memorandum to meet the requirements of 40 CFR Section 60.48c(g) & (i); Minn. R. 7011.0570
For each 6-month period after actual startup, submit a report to the Administrator including the following information: - Calendar dates covered in the reporting period - Records of fuel supplier certification, including a statement signed by the owner or operator that the records of fuel supplier certifications represent all of the fuel oil combusted during the reporting period	40 CFR Section 60.48c(d); 40 CFR Section 60.48c(e)(11); 40 CFR Section 60.48c(j); Minn. R. 7011.0570
C. NSPS PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 09/21/2006, to measure opacity.	40 CFR Section 60.8(a); Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-29**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** EU 040 Coal Crusher House**Associated Items:** CE 006 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 005 Coal Crusher House Dust Collector Stack

What to do	Why to do it
<b>A. EMISSION &amp; OPERATING LIMITS</b>	hdr
Opacity: less than or equal to 20 percent opacity . If opacity exceeds 20 percent in gasses from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, then action must be taken to control exhaust gases so that either:  (1) particulate matter emissions do not exceed 0.020 gr/dscf, or (2) opacity does not exceed 20 percent.	40 CFR Section 60.252(c); Minn. R. 7011.1105, subp. (G)
Particulate Matter < 10 micron: less than or equal to 0.0050 grains/dry standard cubic foot .  This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7009.0020
Solid fuel handling equipment shall not be vented to the atmosphere when emissions are not controlled by pollution control equipment (CE 006). This emission unit is physically capable of operating without venting to the atmosphere, and therefore can operate when control equipment is not operational.	Minn. R. 7007.0800, subp. 2
<b>B. CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Check for visible emissions (during daylight hours) from the control equipment (CE 006) once each calendar week while EU 040 is in operation.	Minn. R. 7007.0800, subp. 4
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - visible emissions are observed; or - the fabric filter or any of its components are found during the inspections to need repair.  Corrective actions shall eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subps. 4, 5, & 14
Operation and Maintenance: The Permittee shall maintain each piece of control equipment according to the manufacturer's specification, shall conduct inspections, and maintain documentation of those actions as required by Minn. R. 7011.0075, subp. 2(A) to 2(I).	Minn. R. 7011.0075, subp. 2
<b>C. RECORDKEEPING &amp; REPORTING REQUIREMENTS</b>	hdr
Recordkeeping: Record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 180 days after Initial Startup of EU 040 to measure Opacity.  Performance Test Pre-test Meeting: due 7 days before each performance test.	40 CFR Section 60.8; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2030, subp. 4
<b>E. NSPS GENERAL PROVISIONS</b>	hdr
Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced within 180 days of completion of any physical or operational change subject to the control measures specified in 60.14(a), compliance with all applicable standards must be achieved.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
Notification of Anticipated Date for Conducting Opacity Observations: due 30 days prior to observation date.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b); Minn. R. 7019.0100, subp. 1
Recordkeeping: Maintain a file of all measurements, maintenance, reports and records for at least five years.	40 CFR Section 60.7(f); Minn. R. 7019.0100, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

Opacity Compliance: Demonstrate compliance with Opacity standards using Reference Method 9.	40 CFR Section 60.11; Minn. R. 7017.2015
No owner or operator shall 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.	40 CFR Section 60.12; Minn. R. 7011.0050

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-31**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** CE 015 SCR (Selective Catalytic Reduction)**Associated Items:** EU 001 Boiler 1

MR 007 NOX Analyzer

What to do	Why to do it
A. OPERATING REQUIREMENTS	hdr
Operate and maintain the SCR at all times that EU 001 is in operation except during times of start-up, shutdown, or malfunction (as defined in EU 001). This requirement is effective 450 days after the first firing of the boiler with fuels other than natural gas following the rehabilitation project.	Minn. R. 7007.0800, subps. 2 & 14
Ammonia Injection Rate: The Permittee shall maintain documentation of the normal operating range of the SCR, and have it available for review at the stationary source.  During times that MR 006 is not in operation, the Permittee shall read and record the ammonia injection rate at a minimum of once every 24 hours when the SCR is in operation.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording ammonia injection rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the SCR is in operation.	Minn. R. 7007.0800, subp. 4
B. MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
During times when the Permittee is required to manually monitor ammonia injection rate, the Permittee shall record the time and date of each ammonia injection rate reading and whether or not the recorded value was within the Normal Operating Range determined in the above requirement.	Minn. R. 7007.0800, subps. 4 & 5
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5 & 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - The recorded ammonia injection rate is outside the required operating range; or - The SCR or any of its components are found during the inspections to need repair.  Corrective actions shall return the ammonia injection rate to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for the SCR.	Minn. R. 7007.0800, subps. 4, 5, & 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-32**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** CE 016 Spray Dryer**Associated Items:** EU 001 Boiler 1

MR 006 SO2 Analyzer

What to do	Why to do it
A. OPERATING REQUIREMENTS	hdr
Operate and maintain the spray dryer at all times EU001 is in operation except during times of start-up, shutdown, or malfunction (as defined in EU001). This requirement is effective 450 days after the first firing of the boiler with fuels other than natural gas following the rehabilitation project.	Minn. R. 7007.0800, subps. 2 & 14
Lime Injection Rate: The Permittee shall maintain documentation of the normal operating range of the spray dryer, and have it available for review at the stationary source.  During times that MR 006 is not in operation, the Permittee shall read and record the lime injection rate at a minimum of once every 24 hours when the spray dryer is in operation.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording lime injection rate as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the spray dryer is in operation.	Minn. R. 7007.0800, subp. 4
B. MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
During times when the Permittee is required to manually monitor lime injection rate, the Permittee shall record the time and date of each lime injection rate reading and whether or not the recorded value was within the Normal Operating Range determined in the above requirement.	Minn. R. 7007.0800, subp. 4 & 5
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 & 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - The recorded lime injection rate is outside the required operating range; or - The spray dryer or any of its components are found during the inspections to need repair.  Corrective actions shall return the lime injection rate to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for the spray dryer.	Minn. R. 7007.0800, subp. 4, 5, & 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-33**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** CE 017 Fabric Filter - High Temperature, i.e., T>250 Degrees F**Associated Items:** EU 001 Boiler 1

MR 009 Opacity Monitor

What to do	Why to do it
A. OPERATING REQUIREMENTS	hdr
Operate and maintain the fabric filter at all times that EU001 is in operation, except during times that the flue gas temperature at the inlet to CE017 is less than 190 degrees F. This requirement is effective 270 days after the first firing of the boiler with fuels other than natural gas following the rehabilitation project.	Minn. R. 7007.0800, subps. 2 & 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
B. MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 10 inches of water column unless a new range is set pursuant to Minn. R. 7017.2025 subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 & 14
During times that MR009 is not in operation, the Permittee shall record the pressure drop once every 24 hours when in operation.	
During times when the Permittee is required to manually monitor the pressure drop, the Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Minn. R. 7007.0800, subps. 4 & 5
Periodic Inspections: At least semiannually, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subps. 4, 5 & 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:  - Visible emissions are observed; - The recorded pressure drop is outside the required operating range; or - The fabric filter or any of its components are found during the inspections to need repair.  Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O&M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subps. 4, 5 & 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

Subject Item: FS 003 North Live Coal Pile

What to do	Why to do it
(1) Control fugitive particulate emissions by dust suppression methods on such operations so that fugitive particulate emission are minimized. (2) In the alternative, use an underground bottom feed (plow) of coal to an underground conveyor system provided the exhaust gases from the enclosed spaces do not contain particulate matter in excess of 0.020 grains per dry standard cubic foot (gr/dscf).	Minn. R. 7011.1105, subps. (F)(1) & (2)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

Subject Item: FS 004 South Live Coal Pile

What to do	Why to do it
(1) Control fugitive particulate emissions by dust suppression methods on such operations so that fugitive particulate emission are minimized. (2) In the alternative, use an underground bottom feed (plow) of coal to an underground conveyor system provided the exhaust gases from the enclosed spaces do not contain particulate matter in excess of 0.020 grains per dry standard cubic foot (gr/dscf).	Minn. R. 7011.1105, subps. (F)(1) & (2)



TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

Subject Item: FS 008 Fly Ash Loadout

Associated Items: CE 025 Process Enclosed

What to do	Why to do it
The Permittee shall install and maintain an enclosure to control emissions from the fly ash loadout operation.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-37**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** FS 014 Petroleum Coke Unloading Station (Inactive, reactivation will require new modeling demonstration)**Associated Items:** CE 025 Process Enclosed

GP 003 Coal Handling and Coal Yard Traffic - Limited Operation

What to do	Why to do it
Truck and hauler unloading stations: Control fugitive particulate emissions from the unloading of coal and petroleum coke from trucks or haulers by dust suppression methods so that emissions from such sources are minimized.	Minn. R. 7011.1105, subp. C
After first firing of EU 001 following rehabilitation, in order to receive petroleum coke, the Permittee shall install and maintain an enclosure to control emissions from the petroleum coke unloading operation.	Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-38**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** FS 016 Cooling towers 11-14**Associated Items:** GP 011 22 cooling towers (used for PTE accounting only)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735. (The calculated limit at maximum operation is approximately 0.02 gr/dscf; calculated potential emissions are approximately 0.000044 gr/dscf)	Minn. R. 7011.0715, subp. 1(A)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-39**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item:** FS 017 Cooling towers 15-34**Associated Items:** GP 011 22 cooling towers (used for PTE accounting only)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735. (The calculated limit at maximum operation is approximately 0.02 gr/dscf; calculated potential emissions are approximately 0.000044 gr/dscf)	Minn. R. 7011.0715, subp. 1(A)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-40**

05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

**Subject Item: MR 010 Hg CEMS****Associated Items:** EU 001 Boiler 1

What to do	Why to do it
Install: due before 07/01/2007, a mercury CEMS to monitor mercury emissions from EU 001.	Minn. Stat. 216B.681
CEM Certification Test: due 30 days after Excess Emissions/Downtime Reports (EER's) are first required for the CEMS. The first EER is due 30 days after the end of the calendar quarter following 07/01/2007. Follow the Certification Procedures in 40 CFR Section 75.80(d).	Minn. R. 7017.1050, subp. 1; Minn. R. 7017.1110
CEMS QA/QC: The owner or operator shall meet the applicable QA/QC requirements in 40 CFR Section 75.80(e).	Minn. Stat. 216B.681
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test.	Minn. R. 7017.1180, subp. 2
CEMS Relative Accuracy Test Audit (RATA): due before end of each year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emissions unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs may be conducted using an alternate test method as approved by the MPCA.	40 CFR Section 75.80(e); Minn. R. 7017.1170, subp. 5
Recordkeeping and Reporting: Follow the provisions listed under 40 CFR Section 75.84. This requirement is effective beginning January 1, 2009.	Minn. Stat. 216B.681

**TABLE B: SUBMITTALS****B-1** 05/05/09

Facility Name: Xcel Energy - Allen S King Generating  
Permit Number: 16300005 - 010

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 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

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.

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

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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.

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

AQ Compliance Tracking Coordinator  
Industrial Division  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-2** 05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	EU017, EU018
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup.	EU040
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of the unit and the date construction began.	EU018
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of the unit and the date construction began.	EU017
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of each unit and the date construction of each unit began.	EU040
Notification of the Date Construction Began	due 60 days before Start Of Construction (or as soon as practicable) of Replacements. Submit the name and number of each unit and the date of construction of the replacement parts of each unit begun.	EU040
Notification of the Date Construction Began	due 60 days before Start Of Construction (or as soon as practicable) of Replacements. Submit the name and number of each unit and the date of construction of the replacement parts of each unit begun.  The Permittee submitted notifications for EU 016 and EU 019.	GP004
Notification	due 60 days before 07/01/2007 for the installation of the Hg CEMS. The notification shall include plans and drawings of the proposed system which show the configuration of the monitoring system including any monitor bypass routes.	MR010
Submittal	due 200 days after Initial Startup (200 operating days), submit information documenting the normal lime injection rate observed during the first 180 operating days of required operation when the SO2 monitor showed SO2 emissions to be at or below the SO2 limit prescribed under Subject Item EU 001.	CE016
Testing Frequency Plan	due 60 days after 05/09/2010 for the performance testing of total particulate matter emissions.	EU001
Testing Frequency Plan	due 60 days after Initial Performance Test to measure Opacity on EU 017 and EU 018.	GP004
Testing Frequency Plan	due 60 days after Initial Performance Test to measure Opacity on EU 040.	EU040
Testing Frequency Plan	due 60 days after Performance Test for PM10 emissions. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on 1-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	EU001

**TABLE B: RECURRENT SUBMITTALS****B-3** 05/05/09

Facility Name: Xcel Energy - Allen S King Generating

Permit Number: 16300005 - 010

What to send	When to send	Portion of Facility Affected
Compliance Certification	due 30 days after end of each calendar quarter starting 01/01/2009	MR010
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 07/21/1998. Submit Deviations Reporting Form DRF-1 as amended. 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. The EER must be submitted even if there were no excess emissions, downtime or bypasses during the quarter.  The first EER for the Hg monitor is due 10/30/2007.	SV001
Linearity Test Results Summary	due 30 days after end of each calendar quarter following Linearity and Leak Check Test (Acid Rain Program) if performed.	SV001
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA)	MR010
Relative Accuracy Test Audit (RATA) Results Summary	due 30 days after end of each calendar quarter following CEMS Relative Accuracy Test Audit (RATA).	SV001
Submittal	due 30 days after end of each calendar quarter starting 07/01/2007, the Hg reporting data specified in the MPCA approved Hg monitoring plan submitted by the facility.	MR010
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 07/21/1998 . 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.	Total Facility
Compliance Certification	due 30 days after end of each calendar year starting 07/21/1998 . This is the annual compliance certification report, covering all deviations experienced during the calendar year.	Total Facility



**APPENDIX B****GP 005 Calculations****Facility Name:** Xcel Energy – Allen S. King Generating Plant**Permit Number:** 16300005-010**GP 005 Calculation**

$$\text{Equation B.1} \quad \text{VOC (tpy)} = \sum_{\substack{i=\text{EU 001, EU 028} \\ j=\text{coke, coal, natural gas, fuel oil}}} [\text{EF}_{i,j} \times \text{HI}_{i,j}] \times \frac{1 \text{ ton}}{2000 \text{ lb}}$$

Where:

i = emission units (EU 001, EU 028)

j = fuels used in the previous 12-month period, including coal, coke, natural gas, and/or fuel oil

EF = VOC emission factor obtained from the most recent version of AP-42 or the most recent stack test approved by the MPCA, if any, for each emission unit and each fuel (lb VOC/mmBtu heat input)

HI = 12-month rolling sum heat input for each fuel (mmBtu)

**APPENDIX C PM<sub>10</sub> Modeling Parameters****Facility Name:** Xcel Energy - Allen S. King Generating Plant**Permit Number:** 16300005-010**PM<sub>10</sub> Modeling Parameters**

The following stack and emission parameters were used in the modeling analysis submitted August 16, 2004. Revision of any of these parameters must result in plume dispersion characteristics equivalent to or better than the plume dispersion characteristics modeled and summarized in the model submitted August 16, 2004. Revision of any of these parameters may require a major amendment.

<b>SV ID No.</b>	<b>Source Description</b>	<b>Modeled Height (feet)</b>	<b>Modeled Diameter <sup>1</sup> (feet)</b>	<b>Stack Exit Velocity (feet/sec)</b>	<b>Direction of Flow</b>	<b>Modeled Temperature (°F)</b>	<b>24-Hour Modeled PM<sub>10</sub> (lb/hr)</b>	<b>Annual Modeled PM<sub>10</sub> (lb/hr)</b>
001	Main Boiler	785.1	18.5	95.5	Vertical	169	300	300
003	Coal Gallery	145	3.4	51.5	Vertical	70	1.92	1.92
004	Transfer House 1	21.3	2.5	78.1	Vertical	70	1.58	1.58
005	Coal Crusher House	76.4	3.28	45.3	Vertical	70	1.58	1.58
006	Railcar Unloading	32.8	3	163.4	Vertical	70	4.66	4.66
007	Railcar Unloading	32.8	3	163.4	Vertical	70	4.66	4.66
008	Boiler 11	40.0	4	91.5	Vertical	525	5.33	1.63
009	Boiler 12	27.9	3	41.0	Vertical	550	5.33	1.63
011	Transfer House 2	26.6	2.7	47.9	Vertical	70	1.13	1.13
012	Transfer House 5	15.7	2.7	54.5	Vertical	70	1.28	1.28
013	Emergency Generator	40.0	1.3	169.3	Vertical	891	0.80	0.071
014	Emergency Generator	40.0	1.3	169.3	Vertical	891	0.80	0.071
017	Boiler 13	27.9	3	41.0	Vertical	550	0.46	0.46
018	Flite Conveyors	104.0	3.3	31.5	Vertical	70	1.1	1.1
020	Emergency Generator	14.1	0.3	0.003	Horizontal	1150	0.03	0.03
023	Emergency Generator	11.1	0.3	377	Vertical	936	0.27	0.27
024	Propane Vaporizer 1	6.9	1	11.5	Vertical	550	0.014	0.014
025	Propane Vaporizer 2	6.9	1	11.5	Vertical	550	0.014	0.014
026	Radio System Emergency Generator	14.1	0.3	0	Horizontal	1150	0.029	0.029
028	Fire Pump Engine	16.1	0.3	293.3	Vertical	855	0.044	0.044
029	Lime Day Bin	68	3.3	0.003	Horizontal	70	0.21	0.21

<b>SV ID No.</b>	<b>Source Description</b>	<b>Modeled Height (feet)</b>	<b>Modeled Diameter <sup>1</sup> (feet)</b>	<b>Stack Exit Velocity (feet/sec)</b>	<b>Direction of Flow</b>	<b>Modeled Temperature (°F)</b>	<b>24-Hour Modeled PM<sub>10</sub> (lb/hr)</b>	<b>Annual Modeled PM<sub>10</sub> (lb/hr)</b>
030	Lime Storage Silo	118	3.3	0.003	Horizontal	70	0.15	0.15
031	Byproduct/Fly Ash Storage	123.0	3	0.003	Horizontal	70	0.56	0.56
032	Byproduct/Fly Ash Storage	115	3	0.003	Horizontal	70	0.42	0.42
033	Byproduct/Fly Ash Transfer	50	1.6	0.003	Horizontal	70	0.33	0.33
034	Byproduct/Fly Ash Transfer	50	1.6	0.003	Horizontal	70	0.33	0.33
035	Byproduct/Fly Ash Transfer	50	1.6	53.8	Vertical	70	0.33	0.33
036	Fly Ash Silo	105.8	1.46	0.003	Horizontal	283	0.27	
FS016	Cooling Tower 11	60.3	35.8	20.3	Vertical	70	0.021	0.010
FS016	Cooling Tower 12	60.3	35.8	20.3	Vertical	70	0.021	0.010
FS016	Cooling Tower 13	60.3	35.8	20.3	Vertical	70	0.021	0.010
FS016	Cooling Tower 14	60.3	35.8	20.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 15	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 16	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 17	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 18	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 19	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 20	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 21	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 22	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 23	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 24	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 25	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 26	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 27	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 28	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 29	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 30	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 31	67.3	32.2	25.3	Vertical	70	0.021	0.010
FS017	Cooling Tower 32	67.3	32.2	25.3	Vertical	70	0.021	0.010

<sup>1</sup> If the stack is not round (i.e., it is rectangular), this is the equivalent diameter used in the modeling analysis

**APPENDIX D****Insignificant Activities****Facility Name:** Xcel Energy - Allen S. King Generating Plant**Permit Number:** 16300005-010

The tables below lists the insignificant activities that are currently at the facility and their associated general applicable requirements.

**Insignificant Activities and Applicable Requirements**

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
3(B)	Furnaces, boilers, and incinerators: 2. fuel burning equipment with a capacity less than 500,000 Btu/hour but only if the total combined capacity of all fuel burning equipment at the stationary source with a capacity less than 500,000 Btu per hour is less than or equal to 2,000,000 Btu/hour. <ul style="list-style-type: none"><li>• Locomotive storage building<ul style="list-style-type: none"><li>⇒ 3 heaters @ 75,000 Btu/hr each</li><li>⇒ 1 heater @ 130,000 Btu/hr</li></ul></li></ul>	Minn. R. 7011.0610
3(G)	Emissions from a laboratory, as defined in the subpart <ul style="list-style-type: none"><li>• Water lab activities</li></ul>	Minn. R. 7011.0710/0715
3(H)	Miscellaneous: 3. brazing, soldering or welding equipment <ul style="list-style-type: none"><li>• Welding equipment</li></ul>	Minn. R. 7011.0710/0715
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. <ul style="list-style-type: none"><li>• Loadout of dewatered slag</li><li>• Magnetic separator chute</li><li>• Solvent use (&gt; 200 gallons, &lt; 1 tpy)</li></ul>	Minn. R. 7011.0710/0715

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment. <ul style="list-style-type: none"> <li>Spray paint system (&gt;200 gal/yr) for facility upkeep</li> </ul>	Minn. R. 7011.0710/0715
4	Individual emissions units at a stationary source, each of which has: <p>A. Potential emissions of 5.7 pounds per hour or actual emissions of two tons per year of carbon monoxide;</p> <p>B. Potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs; and</p> <p>C. For hazardous air pollutants, emissions units with:</p> <p>(1) potential emissions of 25 percent or less of the hazardous air pollutant thresholds listed in subp. 5; or</p> <p>(2) combined HAP actual emissions of one ton per year unless the emissions unit emits one or more of the HAPs listed in this subpart.</p> <p>Temporary emergency heating equipment  Internal combustion engines  VOC fugitives from pumps, valves, flanges on distillate forwarding system  Distillate oil storage tanks  Propane vaporizers 1 &amp; 2  Plant propane emergency generator  Plant diesel fire pump engine  Substation diesel emergency generator  Plant propane radio system generator  Plant vacuum system  Slag house vacuum system</p>	Minn. R. 7011.0710/0715 or Minn. R. 7011.2300

#### **Conditionally Insignificant Activities & Applicable Requirements**

	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
<b>Minn. R. 7008.4110</b>	Emissions from equipment venting particulate matter (PM) or particulate matter less than 10 microns (PM <sub>10</sub> ) inside a building, provided that emissions from the equipment are: <p>a. filtered through an air cleaning system; and</p> <p>b. vented inside of the building 100% of the time.</p> <ul style="list-style-type: none"> <li>Sandblasting Room</li> <li>Metal machining equipment</li> </ul>	Minn. R. 7011.0710/0715

**APPENDIX E – Acid Rain Forms**

**Facility Name:** Xcel Energy - Allen S. King Generating Plant

**Permit Number:** 16300005-010



# Phase II NO<sub>x</sub> Compliance Plan

Page 1 of 12

For more information, see instructions and refer to 40 CFR 76.9

This submission is: ☐ New ☒ Revised

## STEP 1

Indicate plant name,  
State, and ORIS code  
from NADB, if applicable

Allen S. King Plant Name	MN State	1915 ORIS Code
-----------------------------	-------------	-------------------

## STEP 2

Identify each affected Group 1 and Group 2 boiler using the boiler ID# from NADB, if applicable. Indicate boiler type: "CB" for cell burner, "CY" for cyclone, "DBW" for dry bottom wall-fired, "T" for tangentially fired, "V" for vertically fired, and "WB" for wet bottom. Indicate the compliance option selected for each unit.

D#	D#	D#	D#	D#	D#
1					
Type	Type	Type	Type	Type	Type
CY					

(a) Standard annual average emission limitation of 0.50 lb/mmBtu (for Phase I dry bottom wall-fired boilers)

☐☐☐☐☐☐

(b) Standard annual average emission limitation of 0.45 lb/mmBtu (for Phase I tangentially fired boilers)

☐☐☐☐☐☐

(c) EPA-approved early election plan under 40 CFR 76.8 through 12/31/07 (also indicate above emission limit specified in plan)

☐☐☐☐☐☐

(d) Standard annual average emission limitation of 0.46 lb/mmBtu (for Phase II dry bottom wall-fired boilers)

☐☐☐☐☐☐

(e) Standard annual average emission limitation of 0.40 lb/mmBtu (for Phase II tangentially fired boilers)

☐☐☐☐☐☐

(f) Standard annual average emission limitation of 0.68 lb/mmBtu (for cell burner boilers)

☐☐☐☐☐☐

(g) Standard annual average emission limitation of 0.86 lb/mmBtu (for cyclone boilers)

☐☐☐☐☐☐

(h) Standard annual average emission limitation of 0.80 lb/mmBtu (for vertically fired boilers)

☐☐☐☐☐☐

(i) Standard annual average emission limitation of 0.84 lb/mmBtu (for wet bottom boilers)

☐☐☐☐☐☐

(j) NO<sub>x</sub> Averaging Plan (include NO<sub>x</sub> Averaging form)

☒☐☐☐☐☐

(k) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(A) (check the standard emission limitation box above for most stringent limitation applicable to any unit utilizing stack)

☐☐☐☐☐☐

(l) Common stack pursuant to 40 CFR 75.17(a)(2)(i)(B) with NO<sub>x</sub> Averaging (check the NO<sub>x</sub> Averaging Plan box and include NO<sub>x</sub> Averaging form)

☐☐☐☐☐☐

Allen S. King
Plant Name (from Step 1)

**STEP 2, cont'd.**

	D#	D#	D#	D#	D#	D#
Type	Type	Type	Type	Type	Type	Type
(m) EPA-approved common stack apportionment method pursuant to 40 CFR 75.17 (a)(2)(i)(C), (a)(2)(iii)(B), or (b)(2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(n) AEL (include Phase II AEL Demonstration Period, Final AEL Petition, or AEL Renewal form as appropriate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(o) Petition for AEL demonstration period or final AEL under review by U.S. EPA or demonstration period ongoing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(p) Repowering extension plan approved or under review	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STEP 3**  
**Read the standard requirements and certification, enter the name of the designated representative, sign & date.**

**Standard Requirements**

General. This source is subject to the standard requirements in 40 CFR 72.9 (consistent with 40 CFR 76.8(e)(1)(i)). These requirements are listed in this source's Acid Rain Permit.

**Special Provisions for Early Election Units**

Nitrogen Oxides. A unit that is governed by an approved early election plan shall be subject to an emissions limitation for NO<sub>x</sub> as provided under 40 CFR 76.8(a)(2) except as provided under 40 CFR 76.8(e)(3)(iii).

Liability. The owners and operators of a unit governed by an approved early election plan shall be liable for any violation of the plan or 40 CFR 76.8 at that unit. The owners and operators shall be liable, beginning January 1, 2000, for fulfilling the obligations specified in 40 CFR Part 77.

Termination. An approved early election plan shall be in effect only until the earlier of January 1, 2008 or January 1 of the calendar year for which a termination of the plan takes effect. If the designated representative of the unit under an approved early election plan fails to demonstrate compliance with the applicable emissions limitation under 40 CFR 76.5 for any year during the period beginning January 1 of the first year the early election takes effect and ending December 31, 2007, the permitting authority will terminate the plan. The termination will take effect beginning January 1 of the year after the year for which there is a failure to demonstrate compliance, and the designated representative may not submit a new early election plan. The designated representative of the unit under an approved early election plan may terminate the plan any year prior to 2008 but may not submit a new early election plan. In order to terminate the plan, the designated representative must submit a notice under 40 CFR 72.40(d) by January 1 of the year for which the termination is to take effect. If an early election plan is terminated any year prior to 2000, the unit shall meet, beginning January 1, 2000, the applicable emissions limitation for NO<sub>x</sub> for Phase II units with Group 1 boilers under 40 CFR 76.7. If an early election plan is terminated on or after 2000, the unit shall meet, beginning on the effective date of the termination, the applicable emissions limitation for NO<sub>x</sub> for Phase II units with Group 1 boilers under 40 CFR 76.7.

**Certification**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name	Gary D. Hudson	
Signature		Date 6/21/02





# Phase II NO<sub>x</sub> Averaging Plan

For more information, see instructions and refer to 40 CFR 76.11

This submission is: ☐ New ☐ Revised

Page 1

Page 1 of 3

## STEP 1

Identify the units participating in this averaging plan by plant name, State, and boiler ID# from NADB. In column (a), fill in each unit's applicable emission limitation from 40 CFR 76.5, 76.6, or 76.7. In column (b), assign an alternative contemporaneous annual emissions limitation (ACEL) in lb/mmBtu to each unit. In column (c), assign an annual heat input limitation in mmBtu to each unit. Continue to page 3 if necessary.

Plant Name	State	ID#	(a) Emission Limitation	(b) ACEL	(c) Annual Heat Input Limit
Allen S. King	MN	1	0.86	1.05	34000000
Black Dog	MN	3	0.46	0.81	5685000
Black Dog	MN	4	0.46	0.81	11036000
High Bridge	MN	3	0.50	0.60	1771500
High Bridge	MN	4	0.50	0.60	1771500
High Bridge	MN	5	0.50	0.60	5037000
High Bridge	MN	6	0.50	0.60	10313000
Minnesota Valley	MN	4	0.46	0.47	1189000
Riverside	MN	6	0.46	0.85	4324500

## STEP 2

Use the formula to enter the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan and the Btu-weighted annual average emission rate for the same units if they are operated in compliance with 40 CFR 76.5, 76.6, or 76.7. The former must be less than or equal to the latter.

Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan

0.54

$$\frac{\sum_{i=1}^n (R_{Li} \times HI_i)}{\sum_{i=1}^n HI_i}$$

Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7

0.54

$$\frac{\sum_{i=1}^n [R_{Li} \times HI_i]}{\sum_{i=1}^n HI_i}$$

≤

≤

Where,

- $R_{Li}$  = Alternative contemporaneous annual emission limitation for unit i, in lb/mmBtu, as specified in column (b) of Step 1;  
 $R_{Li}$  = Applicable emission limitation for unit i, in lb/mmBtu, as specified in column (a) of Step 1;  
 $HI_i$  = Annual heat input for unit i, in mmBtu, as specified in column (c) of Step 1;  
 $n$  = Number of units in the averaging plan

**STEP 3**

Mark one of the two options and enter dates.

☒ This plan is effective for calendar year 2002 through calendar year 2006 unless notification to terminate the plan is given.

☐ Treat this plan as ☐ identical plans, each effective for one calendar year for the following calendar years: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ unless notification to terminate one or more of these plans is given.

**STEP 4**

Read the special provisions and certification, enter the name of the designated representative, and sign and date.

**Special Provisions**Emission Limitations

Each affected unit in an approved averaging plan is in compliance with the Acid Rain emission limitation for NO<sub>x</sub> under the plan only if the following requirements are met:

(i) For each unit, the unit's actual annual average emission rate for the calendar year, in lb/mmBtu, is less than or equal to its alternative contemporaneous annual emission limitation in the averaging plan, and

(a) For each unit with an alternative contemporaneous emission limitation less stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year does not exceed the annual heat input limit in the averaging plan,

(b) For each unit with an alternative contemporaneous emission limitation more stringent than the applicable emission limitation in 40 CFR 76.5, 76.6, or 76.7, the actual annual heat input for the calendar year is not less than the annual heat input limit in the averaging plan, or

(ii) If one or more of the units does not meet the requirements of (i), the designated representative shall demonstrate, in accordance with 40 CFR 76.11(d)(1)(ii)(A) and (B), that the actual Btu-weighted annual average emission rate for the units in the plan is less than or equal to the Btu-weighted annual average rate for the same units had they each been operated, during the same period of time, in compliance with the applicable emission limitations in 40 CFR 76.5, 76.6, or 76.7.

(iii) If there is a successful group showing of compliance under 40 CFR 76.11(d)(1)(ii)(A) and (B) for a calendar year, then all units in the averaging plan shall be deemed to be in compliance for that year with their alternative contemporaneous emission limitations and annual heat input limits under (i).

Liability

The owners and operators of a unit governed by an approved averaging plan shall be liable for any violation of the plan or this section at that unit or any other unit in the plan, including liability for fulfilling the obligations specified in part 77 of this chapter and sections 113 and 411 of the Act.

Termination

The designated representative may submit a notification to terminate an approved averaging plan, in accordance with 40 CFR 72.40(d), no later than October 1 of the calendar year for which the plan is to be terminated.

**Certification**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Gary D. Hudson	
Signature	Date 6/21/02

Plant Name (from Step 1) Allen S. King
--

NO<sub>x</sub> Averaging - Page 3

**STEP 1**

Plant Name	State	ID#	(a) Emission Limitation	(b) Alt. Contemp. Emission Limitation	(c) Annual Heat Input Limit
Riverside	MN	7	0.46	0.85	4324500

**Continue the identification of units from Step 1, page 1, here.**

[illegible]



**Permit Requirements****STEP 3****Read the  
standard  
requirements**

- (1) The designated representative of each affected source and each affected unit at the source shall:
  - (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each affected source and each affected unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  - (ii) Have an Acid Rain Permit.

**Monitoring Requirements**

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

**Sulfur Dioxide Requirements**

- (1) The owners and operators of each source and each affected unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)), or in the compliance subaccount of another affected unit at the same source to the extent provided in 40 CFR 73.35(b)(3), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

**STEP 3,  
Cont'd.**

**Nitrogen Oxides Requirements** The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

**Excess Emissions Requirements**

- (1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

**Recordkeeping and Reporting Requirements**

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:

- (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
- (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
- (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
- (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

**Liability**

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

**Step 3,  
Cont'd.****Liability, Cont'd.**

(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.

(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO<sub>x</sub> averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

**Effect on Other Authorities**

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

**Certification****STEP 4**

**Read the  
certification  
statement,  
sign, and  
date**

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name    Mark Fritsch	
Signature	Date    1-10-03

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 16300005-010**

This technical support document (TSD) 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 determination to issue the permit.

**1. General Information**

**1.1 Applicant and Stationary Source Location:**

Applicant/Address	Stationary Source/Address (SIC Code: 4911)
Northern States Power Company 414 Nicollet Mall Minneapolis, MN 55401	Xcel Energy – Allen S. King Generating Plant Highway 95 & Point Road Oak Park Heights, Washington County
Contact: <b>Jonathan Amos</b> Phone: <b>612-330-7682</b>	

**1.2 Description of the Facility**

The Allen S. King Generating Plant (King Plant) is a coal-fired electric utility located on Highway 95 in Oak Park Heights, Minnesota and has a Part 70 operating permit. The facility's emission sources consist of boilers; fuel and ash storage and handling equipment; and emergency diesel engines. The facility's main power boiler (Boiler No. 1) is a coal-fired cyclone boiler with a generating capacity of 550 megawatts (MW) of electricity.

The Rehabilitation Project authorized through permit action 005 included the installation of new pollution control equipment, modification of the plant heat rejection system, and rehabilitation and life extension of the main (EU001, coal-fired) boiler. The rehabilitation will allow the plant to operate at a capacity approaching its original design rating.

The boiler rehabilitation consisted of the replacement of the furnace floor and support system, the installation of new cyclone burners and re-entrant throats, the replacement of the furnace sidewalls and furnace floor tubes, and the installation of induced draft fans to accommodate additional draft requirements of new control equipment.

The new (additional) control equipment consists of Selective Catalytic Reduction (SCR) reactor for control of nitrogen oxides (NO<sub>x</sub>) emissions, a spray dryer absorber lime-based semi-dry Flue Gas Desulfurization (FGD) system for control of sulfur dioxide (SO<sub>2</sub>) emissions, and a Pulse-Jet cleaned Fabric Filter (PJFF) for additional control of particulate matter (PM).

**1.3 Description of the Activities Allowed by this Permit Action**



This is a major amendment replace the coal crushers (EU 005). The new coal crushers (EU 040) are needed due to the age of the existing crushers as well as the need for more finely crushed coal.

The expiration date for the Mercury reporting requirement in SV 001 was removed due to the Vacatur of the Clean Air Mercury Rule. The expiration date was originally included because the facility would have then been submitting reports to the U.S. Environmental Protection Agency's (EPA) and not the MPCA.

The facility's PTE was recalculated, and the information in the facility description was updated. Several groups and emission units were reorganized and several requirements and citations were updated to meet current MPCA policy. The NESHAP subpart DDDDD requirements were removed from EU 028 due to the Vacatur of the standard.

#### **1.4. Facility Emissions:**

**Table 1. Total Facility Potential to Emit Summary (tpy)**

	<b>PM</b>	<b>PM<sub>10</sub></b>	<b>SO<sub>2</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>VOC</b>	<b>All HAPs</b>
Increase in Total Facility Permitted Emissions	5.18	5.18	0.00	0.00	0.00	0.00	0.00
Total Potential Emissions after Increase	523	814*	3,027	2,592	320	159	178

\* PM<sub>10</sub> includes condensable particulate matter emissions, which are not included in what is defined as Total Particulate Matter (PM).

**Table 4. Facility Classification**

<b>Classification</b>	<b>Major/Affected Source</b>	<b>Synthetic Minor</b>	<b>Minor</b>
PSD	X		
Part 70 Permit Program	X		
Part 63 NESHAP	X		

## **2. Regulatory and/or Statutory Basis**

### **New Source Review**

The facility is an existing major source under New Source Review regulations. No changes are authorized by this permit.

### **Part 70 Permit Program**

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

### New Source Performance Standards (NSPS)

The existing Flite conveyors and the modified EU 004, 006, 011, and 040 are subject to Subpart Y, Standards of Performance for Coal Preparation Plants.

The auxiliary boiler (EU 028) is subject to Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major hazardous air pollutant (HAP) source. The auxiliary boiler (EU028) was subject to the now-vacated NESHAP for industrial boilers (Subpart DDDDD), and those requirements are currently included in the permit. The MPCA considers EU028 to be an existing source (see <http://www.pca.state.mn.us/air/permits/boilerneshap.html>).

### Acid Rain Program

The Allen.S. King Generating Plant remains subject to the SO<sub>2</sub> and NO<sub>x</sub> provisions of Title IV of the Clean Air Act. The King plant will continue to be allocated SO<sub>2</sub> allowances and will meet the requirements of Title IV with these allocations. The King Plant will also continue to meet these requirements by participating in Xcel Energy's NO<sub>x</sub> averaging plan for the state of Minnesota.

### Minnesota State Rules

Portions of the facility are subject to the following Minnesota Standards of Performance:

- Minn. R. 7011.0150 Control of Fugitive Particulate Matter
- Minn. R. 7011.1105 Minnesota Standards for Coal Handling Facilities
- Minn. R. 7011.0610 Minnesota Standards for Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

### Compliance Assurance Monitoring (CAM)

The requirement to include CAM requirements in the permit at this time would be triggered by a "significant permit modification" affecting a Large Pollutant Specific Emission Unit (PSEU); this would require CAM for only the affected PSEU to be included in the permit. In this case, the proposed change involves (1) extending applicability and testing deadlines because of unforeseen problems, and (2) clarifying that the high-temperature baghouse is not to be used at temperatures lower than 190 degrees Fahrenheit. Both changes pertain to control equipment (CE015 and CE017) controlling emissions from a large PSEU (EU001). However, the proposed changes to the permit conditions do not constitute a "significant permit modification" as this term is described in 40 CFR § 70.7(e)(4) – anything that is not covered under "minor permit modification" under 40 CFR § 70.7(e)(2) or "administrative permit amendment" under 40 CFR § 70.7(d).

The proposed changes qualify as a minor permit modification because they (1) do not violate any applicable requirement; (2) do not involve significant changes to existing monitoring, reporting,

or recordkeeping requirements in the permit; (3) do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis; (4) do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject; (5) are not modifications under any provision of title I of the Act; and (6) are not required by the State program to be processed as a significant modification. Therefore, it is not necessary to include CAM for CE015 and CE017 in the permit at this time.

#### Clean Air Interstate Rule (CAIR)

On July 11, 2008, the DC Circuit Court of Appeals issued an opinion pointing out several “fatal flaws” with the Clean Air Interstate Rule. In the opinion, the Court vacated the existing rule. However, the Court never issued the mandate – the vehicle that would have explicitly prevented CAIR from taking effect. EPA petitioned for rehearing, asking the Court to make substantive changes to the July opinion, and to change the remedy from vacatur to simple remand.

On December 23, 2008, the Court issued a panel opinion that changed the remedy. CAIR was remanded to EPA to be rewritten, addressing the flaws identified in the July ruling. However, the Court made no substantive changes to its opinion; EPA must therefore address all the flaws identified in July. With the remedy changing to a simple remand, the entirety of CAIR goes into effect as previously planned (including all parts that the Court identified as flawed.)

One main issue that EPA needs to address on remand is whether Minnesota should continue to be included in CAIR. The Court ruled in July that EPA did not adequately respond to claims made by Minnesota Power that data on Minnesota emissions were inaccurate, and that using better data would result in Minnesota falling below the threshold impact on a non-attainment area that was used to determine inclusion.

In a letter dated October 31, 2008, from Robert Meyers (Principal Deputy Assistant Administrator, Office of Air and Radiation) and Granta Nakayama (Assistant Administrator, Office of Enforcement and Compliance Assurance) to Minnesota Power’s counsel, EPA stated:

*[I]t is the U.S. Environmental Protection Agency’s (EPA) intention to publish in the Federal Register a rule amending the Clean Air Interstate Rule (CAIR) to stay the effectiveness of the rule with respect to sources located in the State of Minnesota. That administrative stay will remain in effect until such time as EPA determines through a rulemaking under the Clean Air Act whether Minnesota should be included in the CAIR region for fine particulate matter. EPA believes that in light of the Court’s decision, sources in Minnesota should not be required to make any additional expenditures to comply with CAIR prior to the expiration of the administrative stay of the rule.*

The Court was aware of this letter when it made its December 23 decision.

EPA’s John Mooney from the Region V Office notified the MPCA that on January 15, 2009, the USEPA Administrator signed the notice for the proposed rule to stay CAIR requirements in Minnesota until the Agency determines whether Minnesota should be in the CAIR region. On January 20, 2009, Mr. Rahm Emanuel, Assistant to the President and Chief of Staff, signed a

“Memorandum for the Heads of Executive Departments and Agencies” on the subject of “Regulatory Review”. In this memorandum, Mr. Emanuel directs his staff to stop sending proposed and final regulations to the Office of the Federal Register (OFR) and to withdraw proposed and final regulations from the OFR that have not been published in the Federal Register. The proposed rule to stay CAIR requirements in Minnesota has not been published in the Federal Register. Copies of the signed proposed rule to stay CAIR requirements in Minnesota and its fact sheet can be found at <http://epa.gov/cair/pdfs/20090114proposal.pdf> <http://epa.gov/cair/pdfs/20090114fs.pdf>

Please also note that under the proposed rule to stay CAIR in Minnesota, EPA requires that as of June 30, 2009, each Minnesota source with recorded allowance allocations under the annual NO<sub>x</sub> trading program must hold an amount of allowances issued for the same year as the recorded allowances (e.g., 2009) equal to the amount of the recorded allocations. EPA also proposes that the Administrator deduct, and retire, these required allowance holdings and that no additional allowance allocations from the state annual NO<sub>x</sub> trading budget for Minnesota be recorded. Although these provisions could be amended after review by staff in President Obama’s administration, this should be an important consideration for management of recorded allowances by CAIR sources in Minnesota.

The date for submitting allowances for the 2009 annual NO<sub>x</sub> program is not until early 2010; EPA should be able to promulgate a stay of the rule by that time. However, it is likely to be in covered sources best interests to continue to report emissions data quarterly as required by the CAIR rule. In addition, Minnesota may be included in the re-promulgated CAIR rule.

It must be noted that after publication, this remains a proposed rule; a stay of the rule is not official until it has gone through the notice and comment rulemaking proceedings in the Federal Register. Such public participation and rule promulgation process could take several months. Until that time, CAIR is officially in effect in Minnesota.

Therefore, for the time being, the permits for CAIR affected facilities have a condition at the total facility level requesting compliance with CAIR with a sunset provision linked to EPA’s future regulatory actions. The MPCA will not go as far as to issue a CAIR permit given the current prospects of the CAIR program in Minnesota.

**Table 5. Regulatory Overview of Units Affected by the Modification/Permit Amendment**

EU, GP, or SV	Applicable Regulations	Comments
FC	Clean Air Interstate Rule	
EU 040	Standards of Performance for Coal Preparation Plants	The requirements from the old coal crushers were carried over to the new ones.
SV 001	Mercury reporting from Minn. Stat. 216B.681	The expiration date for this reporting requirement was removed.

### **3. Technical Information**

#### **3.1 Calculations of Potential to Emit**

Attachment 1 to this TSD contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

### **3.2 Periodic Monitoring**

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

Table 4 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 6. Periodic Monitoring**

<b>EU or GP</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
EU 012	PM/PM10 Limit: $\leq 0.01$ gr/dscf (Title I Condition, Minn. R. 7011.0735)  Opacity Limit: $\leq 20\%$ (Minn. R. 7011.0715)	O & M Plan, Visible Emissions checks, recordkeeping, periodic inspections, corrective actions.	Visible emission checks are used because the filter is open to the atmosphere.
EU 040	PM 10 Limit: $\leq 0.005$ gr/dscf (Minn. R. 7009.0020)  Opacity Limit: $\leq 20\%$ (40 CFR § 60.252(c))	Visible Emissions checks, recordkeeping, corrective actions, notifications.	The PM 10 limit is from modeling.

### **3.3 Permit Organization**

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements.

### **3.4 Comments Received**

Public Notice Period: 3/20/2009 – 4/20/2009

EPA 45-day Review Period: 3/20/2009 – 5/4/2009

The MPCA received a petition signed by 211 people accompanied by a cover letter the public notice period; however, the comments did not indicate specifically what action or changes the signers wanted from the MPCA, or provide justification for denial of the permit as is required by Minn. R. 7001.0110, subp 2. The 45-day EPA Review Period was not restarted, and no changes were made to the permit as a result of these comments.

## **4. Conclusion**

Based on the information provided by Xcel Energy, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 16300005-010, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:      Chris Buntjer (permit writer/engineer)  
   Bob Beresford (enforcement)  
   Shanda Fisher (stack testing)  
   Trevor Shearen (peer reviewer)

AQ File No. 202G; DQ 2507

Attachments:    1. Calculation Spreadsheets  
                         2. CD-01 Forms  
                         3. Public Comments  
                         4. Response to Comments