



**AIR EMISSION PERMIT NO. 03700015-004**  
**Total Facility Operating Permit - Reissuance**

**IS ISSUED TO**

Northern States Power Company a Minnesota Corporation

**Xcel Energy - Inver Hills Generating Plant**  
3185 117th Street East  
Inver Grove Heights, Dakota County, MN 55077

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

This permit reissuance supersedes Air Emission Permit No. 03700015-003 and authorizes the Permittee to operate 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. Any additions or changes to conditions incorporated into Minnesota's State Implementation Plan (SIP) under 40 CFR § 52.1220, designated "Title I: SIP for SO<sub>2</sub>" must go through the federal SIP approval process before becoming effective. 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 SIP 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; Part 70/Major for NSR

**Operating Permit Issue Date:** July 16, 2014

**Expiration Date:** July 16, 2019 - All Title I Conditions do not expire.

Each new or revised condition designated "Title I Condition: SIP for SO<sub>2</sub>" is not effective or enforceable until approved by EPA as a SIP revision under Title I of the Clean Air Act.

A handwritten signature in black ink, appearing to read "Don Smith", written over a horizontal line.

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

for John Linc Stine  
Commissioner  
Minnesota Pollution Control Agency

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**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 Inver Hills Generating Plant is a peak electrical generation facility with a capacity of 440 megawatts (MW). The facility is composed of six identical pre-NSPS General Electric natural gas or fuel oil-fired simple cycle combustion turbine/generator sets. The facility is on call to operate, as needed, any or all of the six primary turbine/generator sets. Each turbine is capable of using natural gas and distillate oil as a fuel source. Natural gas is the primary fuel, and fuel oil is used mostly during curtailment of natural gas (which is typically in the winter unless a natural gas pipeline break occurs during non-winter months). The Permittee has indicated that historically the overall fuel usage for the turbines is 90 percent natural gas and 10 percent fuel oil. There are also two emergency generators powered by diesel engines and several insignificant emission sources on site. Distillate oil and other petroleum products are stored in a 10 million gallon above ground storage tanks.

**PER 004**

Air Emission Permit No. 03700015-004 is the reissuance of the Part 70 permit for the Xcel Energy – Inver Hills Generating Plant. It supersedes Air Emission Permit No. 03700015-003. The permit does not authorize any new construction or physical modifications, although some changes have been made to the permit primarily to facilitate changes to SIP.

The SIP conditions in the permit ensure that the air quality in the area around the Inver Hills Generating Plant (the Pine Bend area) remain in compliance with the National Ambient Air Quality Standards (NAAQS) for sulfur dioxide. This permit streamlines the facility's SIP requirements. In doing so, the permit becomes more restrictive (i.e., more protective of the NAAQS). The Title I SIP conditions in the permit will be submitted to the EPA for its approval of the changes to the SIP.

A small number of housekeeping changes have also been made in this permit.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt  
 Permit Number: 03700015 - 004

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

**Subject Item: Total Facility**

What to do	Why to do it
SOURCE SPECIFIC REQUIREMENTS	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
Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling for the SO2 SIP are listed in Appendix C of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in the SO2 SIP submittal. The Permittee shall demonstrate this equivalency in the proposal. 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.	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7009.0020
State Implementation Plan Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of the required monitoring, sample, measurement, or report that corresponds with the "Title I Condition: SIP for SO2 NAAQS" requirement.	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP
<p>Quarterly Report for the State Implementation Plan for Sulfur Dioxide:</p> <p>Not more than 30 days after the end of each calendar quarter starting 07/28/1992, the Permittee shall submit a report containing the following information:</p> <p>1) The percent sulfur content by weight and the heating value of the fuel oil in million British Thermal Units per gallon; and</p> <p>2) A summary of any exceedances of the emission limitation, monthly fuel use limitation and the sulfur content limitation during the calendar quarter. The report shall provide an explanation of each exceedance which occurred or a statement stating that no exceedances occurred. The report shall also state if fuel oil was burned during the monitored quarter.</p>	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP
Deviations from requirements cited as "Title I Condition: SIP for SO2 NAAQS" shall be reported semi-annually with the Semi-annual Deviations Report required by this permit. Reporting shall occur even if there were no deviations for this reporting period.	Minn. R. 7007.0800, subp. 6(C)1; Alternative to SIP Quarterly Report.
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NSR	hdr
<p>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 52.21(r)(6)(vi)(b).</p> <p>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.</p>	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

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<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following:</p> <ol style="list-style-type: none"> <li>1. Project description</li> <li>2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected</li> <li>3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU.</li> <li>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.</li> </ol> <p>The Permittee shall maintain records of this documentation.</p>	<p>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 &amp; 5</p>
<p>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.</p>	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 &amp; 5</p>
<p>The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if 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:</p> <ol style="list-style-type: none"> <li>a. The name and ID number of the facility, and the name and telephone number of the facility contact person</li> <li>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 increase are exceeded.</li> <li>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.</li> </ol>	<p>Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 &amp; 5</p>
<p><b>OPERATIONAL REQUIREMENTS</b></p>	<p>hdr</p>
<p>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.</p>	<p>Minn. Stat. Section 116.07, subds. 4a &amp; 9; Minn. R. 7007.0100, subp. 7(A), 7(L), &amp; 7(M); Minn. R. 7007.0800, subps. 1, 2 &amp; 4; Minn. R. 7009.0010-7009.0080</p>
<p>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.</p>	<p>Minn. R. 7011.0020</p>
<p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>
<p>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 &amp; 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.</p>	<p>Minn. R. 7007.0800, subps. 14 and 16(J)</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 4</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

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
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: 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)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
<b>PERFORMANCE TESTING</b>	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	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: 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
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
<b>MONITORING REQUIREMENTS</b>	hdr
Monitoring Equipment Calibration - The Permittee shall either:  1. Calibrate or replace required monitoring equipment every 12 months; or 2. Calibrate at the frequency stated in the manufacturer's specifications.  For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
<b>RECORDKEEPING</b>	hdr
Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<p>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.</p>	<p>Minn. R. 7007.1200, subp. 4</p>
<p>REPORTING/SUBMITTALS</p>	<p>hdr</p>
<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>	<p>Minn. R. 7019.1000, subp. 3</p>
<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>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>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.</p>	<p>Minn. R. 7019.1000, subp. 1</p>
<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>	<p>Minn. R. 7019.1000, subp. 1</p>
<p>Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.</p>	<p>Minn. R. 7007.1150 - 7007.1500</p>
<p>Application for Permit Reissuance: due 180 days before expiration of existing permit.</p>	<p>Minn. R. 7007.0400, subp. 2</p>
<p>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). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>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.</p>	<p>Minn. R. 7019.3000 - 7019.3100</p>
<p>Emission Fees: due 30 days after receipt of an MPCA bill.</p>	<p>Minn. R. 7002.0005 - 7002.0095</p>



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item: GP 001 Electric Generating Combustion Turbines**

- Associated Items:** EU 001 Combustion Turbine 1  
 EU 002 Combustion Turbine 2  
 EU 003 Combustion Turbine 3  
 EU 004 Combustion Turbine 4  
 EU 005 Combustion Turbine 5  
 EU 006 Combustion Turbine 6

What to do	Why to do it
The requirements of this group apply individually to each associated item in this group unless specified.	hdr
<b>EMISSION AND OPERATIONAL REQUIREMENTS</b>	hdr
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than or equal to 0.48 percent by weight for all fuels. (Compliance with this limit demonstrates compliance with the 0.50 lb SO2/million BTU limit.)  THIS LIMIT WILL BE TERMINATED ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 0.005 percent by weight for all fuels. (Compliance with this limit demonstrates compliance with the 0.50 lb SO2/million BTU limit.)  THIS CONDITION WILL BECOME EFFECTIVE ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2
Allowable Fuel Types: Distillate fuel oil and natural gas.	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2
Total Combined Distillate Fuel Usage: less than or equal to 9.41 million gallons/month using 12-month Rolling Average	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP
<b>MONITORING REQUIREMENTS</b>	hdr
THIS CONDITION WILL BE TERMINATED ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.  Fuel Oil Analysis:  The Permittee shall obtain the fuel oil sulfur content and heating value by one of the following methods:  METHOD A. By sampling and analyzing the fuel in accordance to the following:  1) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;  2) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

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<p>Fuel Oil Analysis (cont.)</p> <p>3) If the fuel delivery sample analysis result is no greater than 0.48% sulfur, the Permittee shall compute a weighted average sulfur content of the fuel in the tank using the analysis from the fuel delivery sample and any previous value for sulfur content of fuel in the tank.</p> <p>4) If the delivery sample analysis result is greater than 0.48% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p> <p>5) In January and July of each year, the Permittee shall collect a sample from the fuel line to the gas turbines. The sample shall be analyzed for sulfur content and heating value. The results shall be used as the new sulfur content and heating value of the fuel in the tank.</p> <p>OR,</p> <p>METHOD B. By limiting fuel oil sulfur content to 0.10% by weight. The sulfur content will be assured by:</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p>Fuel Oil Analysis (cont.)</p> <p>1) Obtaining and retaining a guarantee from the fuel supplier indicating that each shipment of fuel oil delivered to the Facility will not contain more that 0.48 percent by weight; and by</p> <p>2) Sampling and analyzing the fuel in accordance with the following:</p> <p>a) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>b) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p>Fuel Oil Analysis (cont.)</p> <p>c) If any delivery sample analysis result is greater than 0.48% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p>THIS CONDITION WILL BECOME EFFECTIVE ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.</p> <p>Fuel Oil Analysis:</p> <p>The Permittee shall obtain the fuel oil sulfur content and heating value by one of the following methods:</p> <p>METHOD A. By sampling and analyzing the fuel in accordance to the following:</p> <p>1) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>2) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<p>Fuel Oil Analysis (cont.)</p> <p>3) If the fuel delivery sample analysis result is no greater than 0.005% sulfur, the Permittee shall compute a weighted average sulfur content of the fuel in the tank using the analysis from the fuel delivery sample and any previous value for sulfur content of fuel in the tank.</p> <p>4) If the delivery sample analysis result is greater than 0.005% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p> <p>5) In January and July of each year, the Permittee shall collect a sample from the fuel line to the gas turbines. The sample shall be analyzed for sulfur content and heating value. The results shall be used as the new sulfur content and heating value of the fuel in the tank.</p> <p>OR,</p> <p>METHOD B. By limiting fuel oil sulfur content to 0.0015% by weight. The sulfur content will be assured by:</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p>Fuel Oil Analysis (cont.)</p> <p>1) Obtaining and retaining a guarantee from the fuel supplier indicating that each shipment of fuel oil delivered to the Facility will not contain more than 0.0015 percent by weight; and by</p> <p>2) Sampling and analyzing the fuel in accordance with the following:</p> <p>a) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>b) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p>Fuel Oil Analysis (cont.)</p> <p>c) If any delivery sample analysis result is greater than 0.0015% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP</p>
<p><b>RECORDKEEPING</b></p>	<p>hdr</p>
<p>Fuel Supplier Certification or Guarantee: Keep on site a copy of the fuel supplier certification or guarantee identifying the type of fuel oil and the percent by weight sulfur content range.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)</p>
<p>Daily Recordkeeping: On each day of operation, the Permittee shall record the total quantity of all fuel used at the facility. This shall be based on flowmeters.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)</p>
<p>Fuel Usage Recordkeeping: By the 15th day of each month, the Permittee shall use daily fuel usage records to calculate the monthly fuel usage on a 12-month rolling average basis.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)</p>
<p>SO2, and Emissions and Operating Records.</p> <p>The Permittee shall generate and maintain records containing information to demonstrate compliance with the emission limitation and operating requirements. The Permittee shall retain records containing the following information:</p> <p>1) The results of the fuel oil analyses for sulfur content (percent by weight) and heating value (million British Thermal Units per gallon), the date the fuel oil was sampled, and the methods used to sample the fuel oil and determine the sulfur content and heating value of the fuel oil.</p> <p>2) Monthly and 12-month rolling average fuel oil use. The records shall be signed by the person entering information into the record.</p>	<p>Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 5</p>
<p>The Permittee shall install, calibrate, maintain and operate flowmeters for all fuel used at the facility.</p>	<p>Minn. R. 7007.0800, subp. 4 and 5</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** GP 002 Emergency Diesel Generators

**Associated Items:** EU 007 Diesel Generator 1 ODG-GEN-001

EU 008 Diesel Generator 2 ODG-GEN-002

What to do	Why to do it
The requirements of this group apply individually to each associated item in this group, unless specified.	hdr
EMERGENCY RICE DEFINITION	hdr
<p>The Permittee shall operate EU 007 and EU 008 according to the requirements in paragraphs 40 CFR Section 63.6640 (f)(1) through (3). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR Section 63.6640(f)(1) through (3), is prohibited. If the engine is not operated according to the requirements in 40 CFR Section 63.6640(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.</p> <p>(continued below)</p>	40 CFR Section 63.6640(f); Minn. R. 7011.8150
<p>(1) There is no time limit on the use of emergency stationary RICE in emergency situations.</p> <p>(2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR Section 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR Section 63.6640(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).</p>	40 CFR Section 63.6640(f)(1) - (2); Minn. R. 7011.8150
<p>2(i) The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.</p>	40 CFR Section 63.6640(f)(2)(i); Minn. R. 7011.8150
<p>2(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see 40 CFR Section 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.</p> <p>2(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.</p>	40 CFR Section 63.6640(f)(2)(ii) - (2)(iii); Minn. R. 7011.8150
<p>(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR Section 63.6640(f)(2) above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.</p>	40 CFR Section 63.6640(f)(3); Minn. R. 7011.8150
EMISSION AND OPERATING LIMITS	hdr
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . The potential to emit from the unit is 0.05 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.2300, subp. 2
Fuel Type: Distillate oil only, by design.	40 CFR Section 72.7(a)(2); Minn. R. 7007.1075; Minn. R. 7005.0100, subp. 35a

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<p>Sulfur Content of Fuel: less than or equal to 0.05 percent by weight on an annual average.</p>	<p>40 CFR Section 72.7(a)(3); Minn. R. 7007.1075</p>
<p>Operating Hours: less than or equal to 816 hours/year using 12-month Rolling Sum as a total for GP 002.</p>	<p>Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>
<p><b>MONITORING AND RECORDKEEPING</b></p>	<p>hdr</p>
<p>The Permittee shall obtain from the fuel supplier a certificate or other record indicating that the fuel delivered for use in the GP 002 emission units has a sulfur content less then or equal to 0.05 percent by weight on a 12-month annual average.</p>	<p>40 CFR Section 72.7; Minn. R. 7007.0800, subp. 4 and 5</p>
<p>Average Annual Suflur Content Determination</p> <p>The Permittee shall calculate the annual average sulfur content, as a percentage by weight, using the equation in 40 CFR Section 72.7(d)(2). In lieu of the factor, volume times density, in the equation, the factor, mass (Mn), may be used, where Mn is: mass of the nongaseous fuel in a delivery during the year to the unit of which the nth sample is taken, in lb.</p> <p>Fuel shall be sampled at least once for every delivery.</p>	<p>40 CFR Section 72.7(d)(3); Minn. R. 7007.1075</p>
<p>For a period of 5 years from the date the records are created, the Permittee shall retain at the source records demonstrating that the requirements of 40 CFR Section 72.7(a) are met. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the Administrator or the permitting authority.</p> <p>(i) Such records shall include, for each delivery of fuel to the unit, the type of fuel, the sulfur content, and the sulfur content of each sample taken.                  (ii) The Permittee bears the burden of proof that the requirements of 40 CFR Section 72.7(a) are met.</p>	<p>40 CFR Section 72.7(f)(3); Minn. R. 7007.1075</p>
<p>Loss of exemption. An exempt unit shall be treated as an affected unit under the Acid Rain Program on the earliest of the following dates:</p> <p>(A) The date on which the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe;                  (B) The date on which the unit burns any coal or coal-derived fuel except for coal-derived gaseous fuel with a total sulfur content no greater than natural gas; or                  (C) January 1 of the year following the year in which the annual average sulfur content for nongaseous fuel burned at the unit exceeds 0.05 percent by weight (as determined under 40 CFR Section 72.7(d)).</p>	<p>40 CFR Section 72.7(f)(4)(i); Minn. R. 7007.1075</p>
<p>For each day of operation of any GP 002 emission unit(s), record the operating start and stop times. By the 15th of each month, calculate and record the total combined GP 002 operating hours for the previous month, and for the previous 12-month period (12-month rolling sum).</p>	<p>Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** GP 005 Emergency Diesel Engines

**Associated Items:** EU 009 Fire Pump diesel engine

EU 010 Substation black start diesel generator

What to do	Why to do it
The requirements of this group apply individually to each associated item in this group.	hdr
EMISSION AND OPERATIONAL REQUIREMENTS	hdr
Opacity: less than or equal to 20 percent once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . The potential to emit from the units is 0.29 lb/MMBtu due to equipment design and allowable fuels.	Minn. R. 7011.2300, subp. 2
<p>Circumvention: The Permittee shall not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to:</p> <p>(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere or</p> <p>(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions.</p>	40 CFR Section 63.4(b); Minn. R. 7011.7000
Change oil and filter every 500 hours of operation or annually, whichever comes first. The Permittee has the option of utilizing an oil analysis program in order to extend the oil change requirement as described below.	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150
Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150
Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150
The Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150
The Permittee shall be in compliance with the emission limitations and operating limitations in this subpart that apply at all times.	40 CFR Section 63.6605(a); Minn. R. 7011.8150
At all times the Permittee shall operate and maintain EU 009 and EU 010, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.	40 CFR Section 63.6605(b); Minn. R. 7011.8150
The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.	40 CFR Section 63.6625(e); Minn. R. 7011.8150
The Permittee shall install a non-resettable hour meter on EU 009 and EU 010 if one is not already installed by the compliance date.	40 CFR Section 63.6625(f); Minn. R. 7011.8150
The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply.	40 CFR Section 63.6625(h); Minn. R. 7011.8150

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<p>The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement. The oil analysis must be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following 3 parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5.</p> <p>(continued below)</p>	<p>40 CFR Section 63.6625(i); Minn. R. 7011.8150</p>
<p>(continued from above)</p> <p>If none of the condemning limits are exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.</p>	<p>40 CFR Section 63.6625(i); Minn. R. 7011.8150</p>
<p>The Permittee shall demonstrate continuous compliance with each emission limitation and operating limitation in Table 2c of 40 CFR pt. 63, subp. ZZZZ that apply according to methods specified in Table 6 of 40 CFR pt. 63, subp. ZZZZ.</p>	<p>40 CFR Section 63.6640(a); Minn. R. 7011.8150</p>
<p>The Permittee shall operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or the Permittee shall develop and follow a maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p>	<p>40 CFR Section 63.6640(a); 40 CFR Section 63.6655(d); 40 CFR pt. 63 subp. ZZZZ, Table 6; Minn. R. 7011.8150</p>
<p>The Permittee shall comply with the General Provisions in 40 CFR Section 63.1 through 63.15, as applicable.</p>	<p>40 CFR Section 63.6665; 40 CFR pt. 63 subp. ZZZZ, Table 8; Minn. R. 7011.8150</p>
<p><b>REQUIREMENTS FOR EMERGENCY STATIONARY RICE</b></p>	<p>hdr</p>
<p>The Permittee shall operate the emergency stationary RICE according to the requirements in paragraphs 40 CFR Section 63.6640 (f)(1) through (4) of 40 CFR Section 63.6640(f). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR Section 63.6640(f)(1) through (4), is prohibited. If the engine is not operated according to the requirements in 40 CFR Section 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.</p>	<p>40 CFR Section 63.6640(f); Minn. R. 7011.8150</p>
<p>(1) There is no time limit on the use of emergency stationary RICE in emergency situations.</p> <p>(2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR Section 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR Section 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).</p>	<p>40 CFR Section 63.6640(f)(1) - (2); Minn. R. 7011.8150</p>
<p>The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indication that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.</p>	<p>40 CFR Section 63.6640(f)(2)(i); Minn. R. 7011.8150</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<p>2(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see Section 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.</p> <p>2(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.</p>	<p>40 CFR Section 63.6640(f)(2)(ii) - (2)(iii); Minn. R. 7011.8150</p>
<p>The Permittee may operate the emergency stationary RICE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing and emergency demand response provided in 40 CFR Section 63.6640(f)(2). The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.</p>	<p>40 CFR Section 63.6640(f)(3); Minn. R. 7011.8150</p>
<p><b>RECORDKEEPING REQUIREMENTS</b></p>	<p>hdr</p>
<p>The Permittee shall maintain files of all information required by 40 CFR pt. 63 in a form suitable and readily available for expeditious inspection and review.</p> <p>The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Except that the most recent 2 years of data do not have to be retained on site.</p>	<p>40 CFR Section 63.10(b)(1); Minn. R. 7019.0100, subp. 2(B)</p>
<p>The Permittee shall keep the records required in Table 6 of 40 CFR pt 63, subp. ZZZZ, to show continuous compliance with each emission or operating limitation that applies.</p>	<p>40 CFR Section 63.6655(d); Minn. R. 7011.8150</p>
<p>The Permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the maintenance plan.</p>	<p>40 CFR Section 63.6655(e); Minn. R. 7011.8150</p>
<p>The Permittee shall keep records of the hours of operation of the engine that are recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for demand response operation, the Permittee shall keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.</p>	<p>40 CFR Section 63.6655(f); Minn. R. 7011.8150</p>
<p>The Permittee shall maintain all records in a form suitable and readily available for expeditious review according to 40 CFR Section 63.10(b)(1).</p> <p>As specified in 40 CFR Section 63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.</p> <p>The Permittee shall keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR section 63.10(b)(1).</p>	<p>40 CFR Section 63.6660; 40 CFR Section 63.10(b)(1); Minn. R. 7011.8150; Minn R. 7019.0100, subp. 2(B)</p>
<p><b>REPORTING AND NOTIFICATION REQUIREMENTS</b></p>	<p>hdr</p>
<p>The Permittee shall report each instance in which the stationary RICE did not meet each applicable emission limitation or operating limitation. These instances are deviations from the emission and operating limitations. These deviations shall be reported according to the requirements in 40 CFR Section 63.6650.</p>	<p>40 CFR Section 63.6640(b); Minn. R. 7011.8150</p>
<p>The Permittee shall report each instance when the applicable requirements in Table 8 of 40 CFR pt. 63, subp. ZZZZ were not met.</p>	<p>40 CFR Section 63.6640(e); 40 CFR pt. 63, subp. ZZZZ, Table 8; Minn. R. 7011.8150</p>
<p>The Permittee shall report any failure to perform the work practice on the schedule required in 40 CFR pt. 63, Table 2c due to an emergency or an unacceptable risk under Federal, State or local law. The work practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.</p>	<p>40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150</p>



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-13 07/16/14

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item: TK 001 distillate oil**

<b>What to do</b>	<b>Why to do it</b>
EMISSION AND OPERATIONAL LIMITS	hdr
Opacity: less than or equal to 20 percent opacity.	Minn. R. 7011.0715, subp. 1(B)

**TABLE B: SUBMITTALS**

B-1 07/16/14

Facility Name: Xcel Energy - Inver Hills Generating Plt  
Permit Number: 03700015 - 004

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

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

Send any application for a permit or permit amendment to:

Fiscal Services  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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.

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.

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

Chief Air Enforcement  
Air and Radiation Branch  
EPA Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604

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

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

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: RECURRENT SUBMITTALS**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

<b>What to send</b>	<b>When to send</b>	<b>Portion of Facility Affected</b>
Quarterly Report	due 30 days after end of each calendar quarter starting 07/28/1992. The report shall contain the following: 1) The percent sulfur content by weight and the heating value of the fuel oil in million British Thermal Units per gallon; 2) Summary of any exceedances of the emission limitation, monthly fuel use limitation and the sulfur content limitation during the calendar quarter. The report shall provide an explanation of each exceedance which occurred or a statement stating that no exceedances occurred. The report shall also state if fuel oil was burned during the monitored quarter.	Total Facility
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. 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 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility

**Appendix B: Insignificant Activities**  
**Facility Name: Xcel Energy – Inver Hills Generating Plant**  
**Permit Number: 03700015-004**

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

<b>Minn. R. 7007.1300, subpart</b>	<b>Rule Description of the Activity</b>	<b>Applicable Requirement</b>
3(H)3	Brazing, soldering, and welding equipment	Minn. R. 7011.0710/0715
3(K)	Spray paint equipment used for facility upkeep	Minn. R. 7011.0715
4	Temporary (emergency) heating equipment (small portable propane heaters)	Minn. R. 7011.0510/0515
4	Internal combustion engines (<250hp) burning distillate oil, gasoline, or natural gas	Minn. R. 7011.2300
4	VOC fugitives from pumps, valves, and flanges on distillate oil forwarding systems	Minn. R. 7011.0715
4	Water tank heater for fire protection system	Minn. R. 7011.2300
4	Temporary engines for various compressors and pumps (<250h hp)	Minn. R. 7011.2300
4	VOC fugitive emissions from solvents	Minn. R. 7011.0715
4	Various small fuel oil tanks (two 3300 gal tanks by generator building, one 300 gal tank by fuel forwarding house, six 300 gal oil/waste water tanks under loading rack, one 500 gal tank southwest of plant, one 250 gal tank inside foam house)	Minn. R. 7011.1505

Appendix C:  
 Facility Name:  
 Permit Number:

New Unit Exemptions for EU007 and EU008  
 Xcel Energy - Inver Hills Generating Plant  
 03700015-004



AIR TOXICS AND RADIATION  
 SECTION

STEP 1 EPA REGION 5  
 Identify the new unit by plant name, State, and ORIS Code and boiler ID# from NADB.

STEP 2  
 List to one decimal place the nameplate capacity of each generator served by the unit. Then total these entries and enter the result.

STEP 3  
 List all fuels currently burned or expected to be burned, by the unit and the percent sulfur content by weight of each.

STEP 4  
 Read the special provisions and the certification, and sign and date.

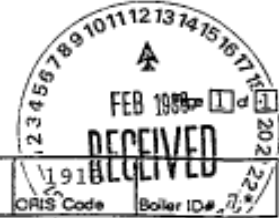
Environmental Protection Agency  
 Acid Rain Program

OMB No. 2060-0258  
 Expires 1-31-96

# New Unit Exemption

For more information, see instructions and refer to 40 CFR 72.7

This submission is:  New  Revised



Plant Name	Inver Hills	State	MN	ORIS Code	Boiler ID#
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\* This is an engine/generator set. Unit is not listed in NADB.

1.825						TOTAL
MWe	MWe	MWe	MWe	MWe	MWe	1.825 MWe

Fuel (current)	Percent SO <sub>2</sub> (current)	Fuel (expected)	Percent SO <sub>2</sub> (expected)
None	%	Distillate fuel oil	Sulfur $\leq 0.05$ %
	%		%
	%		%

### Special Provisions

- The owners and operators of each unit exempted under 40 CFR 72.7 shall surrender allowances equal in number to, and with the same or an earlier compliance use date as, all of those allocated to the unit under subpart B of 40 CFR part 73 for any year for which the unit is exempted and shall waive the right to receive any allowances to be allocated under subpart B of 40 CFR part 73 for any year for which the unit is exempted.
- The owners and operators of each unit exempted under 40 CFR 72.7 shall determine the sulfur content by weight of its fuel as follows:
  - For petroleum or petroleum products that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, a sample of each delivery of such fuel shall be tested using ASTM methods ASTM D4057-88 and ASTM D129-91, ASTM D2622-92, or ASTM D4294-90.
  - For natural gas that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, the sulfur content shall be assumed to be 0.05 percent or less by weight.
  - For gaseous fuel (other than natural gas) that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, a sample of each delivery of such fuel shall be tested using ASTM methods ASTM D1072-90 and ASTM D1265-92; provided that if the gaseous fuel is delivered by pipeline to the unit, a sample of the fuel shall be tested, at least once every quarter in which the unit operates during any year for which the exemption is in effect, using ASTM method ASTM D1072-90.
- The owners and operators of each unit exempted under 40 CFR 72.7 shall retain at the source that includes the unit, the records of the results of the tests performed under paragraph (2)(i) and (ii) of the special provisions and a copy of the purchase agreements for the fuel under paragraph (2) of the special provisions, stating the sulfur content of such fuel. Such records and documents shall be retained for 5 years from the date they are created.
- On the earlier of the date the written exemption expires, the date a unit exempted under 40 CFR 72.7 burns any fuel with a sulfur content in excess of 0.05 percent by weight (as determined in accordance with paragraph (2) of the special provisions), or 24 months prior to the date the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe, the unit shall no longer be exempted under 40 CFR 72.7 and shall be subject to all requirements of the Acid Rain Program, except that:
  - Notwithstanding 40 CFR 72.30(b) and (c), the designated representative of the source that includes the unit shall submit a complete Acid Rain permit application on the later of January 1, 1998 or the date the unit is no longer exempted under 40 CFR 72.7.
  - For purposes of applying monitoring requirements under part 75 of this chapter, the unit shall be treated as a new unit that commenced commercial operation on the date the unit no longer meets the requirements of 40 CFR 72.7(a).

### 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	Martin F. Dinville
Signature	<i>Martin F. Dinville</i>
Date	12/11/95



DEC 14 1995

AIR TOXICS AND RADIATION BRANCH  
STEP 1. EPA, REGION V  
Identify the new unit by plant name, State, and ORIS Code and boiler ID# from NADB.

STEP 2  
List to one decimal place the nameplate capacity of each generator served by the unit. Then total these entries and enter the result.

STEP 3  
List all fuels currently burned or expected to be burned, by the unit and the percent sulfur content by weight of each.

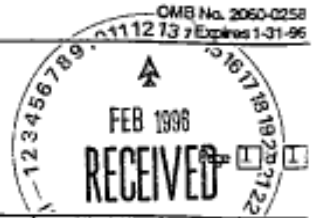
STEP 4  
Read the special provisions and the certification, and sign and date.

Environmental Protection Agency  
Acid Rain Program

# New Unit Exemption

For more information, see instructions and refer to 40 CFR 72.7

This submission is:  New  Revised



Plant Name Inver Hills	State MN	1913 ORIS Code 22	Boiler ID# 8*
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\* This is an engine/generator set. Unit is not listed in NADE TOTAL

1.825 MWe	MWe	MWe	MWe	MWe	1.825 MWe
--------------	-----	-----	-----	-----	--------------

Fuel (current)	Percent SO <sub>2</sub> (current)	Fuel (expected)	Percent SO <sub>2</sub> (expected)
None	%	Distillate fuel oil	Sulfur ≤ 0.05 %
	%		%
	%		%

### Special Provisions

- (1) The owners and operators of each unit exempted under 40 CFR 72.7 shall surrender allowances equal in number to, and with the same or an earlier compliance use date as, all of those allocated to the unit under subpart B of 40 CFR part 73 for any year for which the unit is exempted and shall waive the right to receive any allowances to be allocated under subpart B of 40 CFR part 73 for any year for which the unit is exempted.
- (2) The owners and operators of each unit exempted under 40 CFR 72.7 shall determine the sulfur content by weight of its fuel as follows:
  - (i) For petroleum or petroleum products that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, a sample of each delivery of such fuel shall be tested using ASTM methods ASTM D4057-88 and ASTM D129-91, ASTM D2622-92, or ASTM D4294-90.
  - (ii) For natural gas that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, the sulfur content shall be assumed to be 0.05 percent or less by weight.
  - (iii) For gaseous fuel (other than natural gas) that the unit burns starting on the first day on which the exemption takes effect until the exemption terminates, a sample of each delivery of such fuel shall be tested using ASTM methods ASTM D1072-90 and ASTM D1265-92, provided that if the gaseous fuel is delivered by pipeline to the unit, a sample of the fuel shall be tested, at least once every quarter in which the unit operates during any year for which the exemption is in effect, using ASTM method ASTM D1072-90.
- (3) The owners and operators of each unit exempted under 40 CFR 72.7 shall retain at the source that includes the unit, the records of the results of the tests performed under paragraph (2)(i) and (ii) of the special provisions and a copy of the purchase agreements for the fuel under paragraph (2) of the special provisions, stating the sulfur content of such fuel. Such records and documents shall be retained for 5 years from the date they are created.
- (4) On the earlier of the date the written exemption expires, the date a unit exempted under 40 CFR 72.7 burns any fuel with a sulfur content in excess of 0.05 percent by weight (as determined in accordance with paragraph (2) of the special provisions), or 24 months prior to the date the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe, the unit shall no longer be exempted under 40 CFR 72.7 and shall be subject to all requirements of the Acid Rain Program, except that:
  - (i) Notwithstanding 40 CFR 72.30(b) and (c), the designated representative of the source that includes the unit shall submit a complete Acid Rain permit application on the later of January 1, 1996 or the date the unit is no longer exempted under 40 CFR 72.7.
  - (ii) For purposes of applying monitoring requirements under part 75 of this chapter, the unit shall be treated as a new unit that commenced commercial operation on the date the unit no longer meets the requirements of 40 CFR 72.7(a).

### 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 Martin F. Dinville	Date 12/11/95
Signature <i>Martin F. Dinville</i>	

**Appendix D: Modeling Parameters**  
**Facility Name: Xcel Energy - Inver Hills Generating Plant**  
**Permit Number: 03700015-004**

The table below lists the required monitoring parameters for the facility.

Citation	Requirement
Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Stack Height: greater than or equal to 32 feet from ground level. This requirement applies to each individual stack.
Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Stack Cross-Sectional Area: less than or equal to 150 square feet (7.5 x 20 feet). This requirement applies to each individual stack.
Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Air Flow Rate: greater than or equal to 1,150,000 actual cubic feet/minute for each individual stack exhaust. This limit represents the modeled exhaust flow rate from each stack vent at maximum peak load/peak SO2 emissions. It is not representative of the flow rates at lower loads.
Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Temperature: greater than or equal to 1050 degrees F for each individual stack exhaust. This limit represents the modeled exhaust temperature in each stack vent at maximum peak load/peak SO2 emissions. It is not representative of the exhaust temperature at lower loads.

**TECHNICAL SUPPORT DOCUMENT  
For  
AIR EMISSION PERMIT NO. 03700015-004**

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 preliminary determination to issue the permit.

**1. General Information**

**1.1 Applicant and Stationary Source Location**

**Table 1. Applicant and Source Address**

Applicant/Address	Stationary Source/Address (SIC Code: 4911, 5171)
Northern States Power Company, a Minnesota Corporation 414 Nicollet Mall MP7B Minneapolis, MN 55401-1993	Xcel Energy - Inver Hills Generating Plant 3185 117th Street East Inver Grove Heights Dakota County, Minnesota 55077
Contact: Jonathan Amos Phone: 612-330-7682	

**1.2 Facility Description**

The Inver Hills Generating Plant is a peak electrical generation facility with a capacity of 440 megawatts (MW). The facility is composed of six identical pre-NSPS General Electric natural gas or fuel oil-fired simple cycle combustion turbine/generator sets. The facility is on call to operate, as needed, any or all of the six primary turbine/generator sets. Each turbine is capable of using natural gas and distillate oil as a fuel source. Natural gas is the primary fuel, and fuel oil is used mostly during curtailment of natural gas (which is typically in the winter unless a natural gas pipeline break occurs during non-winter months). The Permittee has indicated that historically the overall fuel usage for the turbines is 90 percent natural gas and 10 percent fuel oil. There are also two emergency generators powered by diesel engines and several insignificant emission sources on site. Distillate oil and other petroleum products are stored in a 10 million gallon above ground storage tanks.

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

This permit action is the reissuance of the Part 70 operating permit.

**1.4 Description of Notifications and Applications Included in this Action**

**Table 2. Notifications and Applications Included in this Action**

Date Received	DQ#	Application/Notification Type and description
04/20/2011	3467	Part 70 Reissuance Application



## 1.5 Facility Emissions

**Table 3. Total Facility Potential to Emit Summary**

	PM tpy	PM <sub>10</sub> tpy	PM <sub>2.5</sub> tpy	SO <sub>2</sub> tpy	NO <sub>x</sub> tpy	CO tpy	CO <sub>2</sub> e tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	298	298	298	12,256	22,100	179	3,980,000	66	19.1	33.1
Total Facility Actual Emissions (2013)	0.239	0.225	0.179	1.17	120	0.90	*	0.714	*	

\*Not reported in MN emission inventory.

**Table 4. Facility Classification**

Classification	Major/Affected Source	Synthetic Minor/Area	Minor/Area
PSD	X		
Part 70 Permit Program	X		
Part 63 NESHAP	X		

## 1.6 Changes to Permit

- Updates to reflect current MPCA templates and standard citation formatting;
- Emission calculations were updated to now include CO<sub>2</sub>e;
- Removed State Implementation Plan (SIP) limits that were terminated on the date the USEPA approved the revision to the SIP;
- Residual fuel oil has been removed as an allowable fuel type in accordance with the revised SIP;
- Changed permit language so requirements are more clearly applied to each unit individually within a group;
- Two previously insignificant activities are now subject to NESHAP Subpart ZZZZ are now included as emission units. The substation black start diesel generator is now EU 009, and the fire pump diesel engine is now EU 010. These emission units make up the newly created GP 005;
- New unit exemption language for the acid rain program has been updated in both the permit and the appendix;
- Modeling parameters have been moved from the permit to the appendix;
- Removed stacks/vents from groups.
- Tank 002 (TK002) and Tank 003 (TK003) have been removed from the permit. The tanks were emptied, cleaned, and isolated from fuel delivery. Only the structures remain on site.
- Inlet fogging system is currently in-operable, and there are no plans to restore the system in the foreseeable future, so the requirements for operating with inlet foggers have been removed from the permit.

## 1.7 Changes to the State Implementation Plan

The Pine Bend area surrounding Xcel's Inver Hills facility currently meets all National and Minnesota Ambient Air Quality Standards (NAAQS and MAAQS). At one time, however, the area's ambient air exceeded the sulfur dioxide (SO<sub>2</sub>) NAAQS. In response, the MPCA crafted conditions designed to bring the area into attainment with the standards. Those conditions applied to this and other facilities

determined to be responsible for the ambient air quality problems. The MPCA is required to have a plan to maintain compliance with the NAAQS. Conditions in the permit identified as “Title I Condition: SIP for SO<sub>2</sub> NAAQS” are elements of this maintenance plan.

During the reissuance of the Part 70 operating permit for its Inver Hills Generating Plant, Xcel Energy has requested that the MPCA change limits that are included in Minnesota’s State Implementation Plan to maintain the Pine Bend area (the area surrounding the Inver Hills Generating Plant) as an attainment (maintenance) area for sulfur dioxide (SO<sub>2</sub>).

The requested changes are summarized in Table 5.

**Table 5. Changes to the SIP Conditions**

<b>Permit Limitation or Condition</b>	<b>Description of Change</b>	<b>Effect</b>
Sulfur content of fuel	The maximum allowable fuel sulfur content to be changed from 0.48 percent by weight to 0.005 percent by weight.	The maximum sulfur content of the fuel currently being provided to the facility is 0.0015 percent by weight so the lowered limit should have no effect.
Fuel Oil Analysis	Method A of demonstrating compliance to be changed from 0.48 percent by weight to 0.005 percent by weight. Method B to be changed from 0.10 percent by weight to 0.0015 percent by weight. This has been done to reflect the lower sulfur content of fuel oil.	As long as the fuel oil contains less than 0.0015 percent sulfur by weight, the facility will be able to use a less onerous compliance option.

This request is the result of a cooperative effort by Xcel Energy, Flint Hills Resources, and the MPCA. At its Inver Hills facility, Xcel receives Ultra Low Sulfur Diesel from the nearby Flint Hills refinery that is guaranteed to have a maximum sulfur content of 15 ppmw (0.0015% by weight). This sulfur content is much lower than the limit in the permit (0.48% by weight), so Xcel Energy has requested that the limit be lowered to more appropriately reflect the actual sulfur content of the fuel. The new conditions are more conservative than those contained in the previous permit, and (following their approval by EPA) they will continue to assure that compliance with the SO<sub>2</sub> NAAQS is maintained, and to help accommodate anticipated construction in the Pine Bend area.

Minnesota must incorporate these changes into its SIP after which EPA must approve them. For this reason, the conditions that are to be eliminated include language indicating that they are no longer applicable only after EPA approves the change.

## **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 Permittee has stated that no New Source Performance Standards apply to the operations at this facility.

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

The facility exceeds the 10 tpy and 25 tpy emission thresholds for single and total HAPS, so the facility is a major source of HAPS.

The combustion turbines are affected sources subject to 40 CFR 63 Subpart YYY. However, they are existing stationary combustion turbines, and therefore have no applicable requirements from this NESHAP (see 40 CFR Section 63.6095).

GP 002 contains two emergency diesel generators (EU 007 and EU 008) that do not need to meet the requirements of the NESHAP Subpart ZZZZ because the generators are >500 hp, and are not contractually obligated to be available for more than 15 hours per calendar year in accordance with 40 CFR §63.6590(b)(3)(iii).

GP 005 contains a fire pump diesel engine (EU 009) and a substation black start diesel generator (EU 010) that are subject to the same requirements of NESHAP Subpart ZZZZ because the units are both classified as emergency compression ignition RICE, that are <500 hp, and located at a major source of HAP emissions.

### Compliance Assurance Monitoring (CAM)

None of the units at the facility are subject to CAM because there is no control equipment.

### Acid Rain Program

The facility has two post-1990 Caterpillar emergency diesel-fired reciprocating internal combustion engines that are grid connected and therefore subject to Title IV. The Permittee committed to limiting diesel fuel sulfur content to 0.05 percent by weight in these units and applied for a new unit exemption from EPA's Acid Rain program.

### Clean Air Interstate Rule (CAIR) / Transport Rule (TR) NO<sub>x</sub> Annual Trading Program [also known as the Cross-State Air Pollution Rule (CSAPR)]

Xcel Energy – Inver Hills Generating Plant was subject to CAIR when it was initially promulgated. However, several actions have taken place resulting in CAIR no longer being an applicable requirement:

- November 3, 2009 – Applicability of CAIR was stayed in Minnesota as of December 3, 2009, except as described in 40 CFR § 52.1240(b). (40 CFR §§ 51.123(a)(3), 51.124(a)(2), 51.125(a)(3), 52.35(e))
- August 8, 2011 – 40 CFR §§ 52.1240(c) and 52.1241(c) were promulgated, replacing CAIR with TR/CSAPR.
- December 30, 2011 – Applicability of TR/CSAPR was stayed by the United States Court of Appeals, and EPA was ordered to go back to CAIR.

The stay of CAIR in Minnesota required sources to hold NO<sub>x</sub> as NO<sub>2</sub> allowances equivalent to their initial allocation. EPA was to deduct and terminate these allowances. The CAMD records now show that zero CAIR NO<sub>x</sub> as NO<sub>2</sub> allowances are held by Minnesota sources, as allowances have been deducted for program termination. The stay of CAIR in Minnesota continues to be in effect and therefore, no CAIR or CSAPR applicable requirements remain for this facility, at this time.

**Minnesota State Rules**

Portions of the facility are subject to Minn. R. 7011.2300 (Standards of Performance for Stationary Internal Combustion Engines).

TK 001 (Distillate Oil Tank) is not subject to Minn. R. 7011.1505 (Standards of Performance for Storage Vessels) because the vapor pressure of fuel oil falls below the 128 mm Hg (2.5 psia) threshold. The highest vapor pressure identified in the application for distillate fuel oil no. 2 fuel oil has a vapor pressure of about 6 mm Hg (0.115 psia). TK 001 is subject to Minn. R. 7011.0715 (Standards of Performance for Post-1969 Industrial process Equipment) as the tank began operation in 1972.

**Table 6. Regulatory Overview of Facility**

Subject Item*	Applicable Regulations	Rationale
GP 001 (Combustion Turbines)	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. Determination of applicable limits from rule: <ul style="list-style-type: none"> <li>The group contains 6 stationary internal combustion engines.</li> </ul>
	40 CFR § 52.1220	State Implementation Plan Conditions for Sulfur Dioxide Maintenance Area. Determination of applicable limits from rule: <ul style="list-style-type: none"> <li>The facility is located in an area with a site specific SIP for SO<sub>2</sub>.</li> </ul>
GP 002 (Diesel Generators)	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines. Determination of applicable limits from rule: <ul style="list-style-type: none"> <li>The group contains 2 stationary internal combustion engines.</li> </ul>
	40 CFR § 72.7	Acid Rain program: Exemption for New Units. The Permittee has applied for new unit exemption from the EPA’s Acid Rain program.
GP 005 (Emergency Engines)	Minn. R. 7011.2300	Standards of Performance for Stationary Reciprocating Internal Combustion Engines. Determination of applicable limits from rule: <ul style="list-style-type: none"> <li>The group contains 2 stationary internal combustion engines.</li> </ul>
	40 CFR pt. 63, subp. ZZZZ Minn. R. 7011.8150	NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE). Determination of applicable limits from rule: <ul style="list-style-type: none"> <li>The units are emergency compression ignition RICE;</li> <li>&lt;500 hp; and</li> <li>Are located at a major source.</li> </ul>
TK 001 (Distillate oil)	Minn. R. 7011.0715	The Industrial Process Equipment rule applies as a default since no other standard applies.

\*Location of the requirement in the permit (e.g., EU, SV, GP, etc.).

### 3. Technical Information

This section discusses a number of technical and regulatory decisions that were made during the review of the application and during permit drafting.

#### 3.1 Calculations of Potential to Emit

Attachment 1 to this TSD contains Form GI-07, which summarizes the PTE of the Facility, while Attachment 2 contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

On January 1<sup>st</sup>, 2014 new Green House Warming Potentials (GWP) for Methane and Nitrous Oxide went into effect. These new GWPs have been taken into account and included in the emissions calculations for CO<sub>2</sub>e.

#### 3.2 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 considered the following:

- the likelihood of the facility 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 7 summarizes the monitoring requirements.

**Table 7. Monitoring**

Subject Item*	Requirement (basis)	Monitoring	Discussion
GP 001 (Combustion Turbines)	Opacity ≤ 20% once operating temp. is attained.  SO <sub>2</sub> ≤ 0.50 lbs/MMBtu heat input  (Minn. R. 7011.2300)	None	Each combustion turbine was tested once during the five-year permit term while burning fuel oil. In each case, the opacity reading was 0%. Because there appears to be little chance of violating the 20% limit, the requirement to conduct periodic opacity testing has been eliminated from the permit.  The facility demonstrating compliance with the sulfur content of fuel limit will ensure compliance with the SO <sub>2</sub> heat input limit.

Subject Item*	Requirement (basis)	Monitoring	Discussion
	<p>Sulfur Content of Fuel <math>\leq</math> 0.005 percent by weight for all fuels.</p> <p>Fuel Oil Usage <math>\leq</math> 9.41 million gallons on a 12-month rolling average basis.</p> <p>(Title I Condition: SIP for SO<sub>2</sub> NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP)</p>	<p>Fuel Sulfur Content Restriction / Sulfur Dioxide Limit</p>	<p>The fuel oil supplier must provide a certification or other record that the sulfur content of the fuel oil meets the limit. The facility currently receives fuel that is guaranteed to have a maximum sulfur content of 0.0015 percent by weight. This is well below the required limit so an exceedance is unlikely. The supplier guarantee can be found in Attachment 4 of this TSD.</p> <p>The amount of fuel used at the facility must be tracked daily. The sulfur content of each shipment of fuel oil used at the facility must be analyzed upon receipt. On a monthly basis, the facility determines compliance with the fuel usage limit. Sulfur dioxide emission rates are also calculated from these data.</p>
<p>GP 002 (Diesel Generators)</p>	<p>Opacity <math>\leq</math> 20% once operating temp. is attained.</p> <p>SO<sub>2</sub> <math>\leq</math> 0.50 lbs/MMBtu</p> <p>(Minn. R. 7011.2300)</p>	<p>None</p>	<p>It is unlikely that the opacity limit will be exceeded due to the decreased particle formation from the low sulfur content of fuel used.</p> <p>The potential to emit for SO<sub>2</sub> from the unit is 0.05 lb/MMBtu. Due to the allowable fuel used at the facility it is unlikely to exceed the limit.</p>
	<p>Operating Hours <math>\leq</math> 816 hours/year using 12-month Rolling Sum as a total for GP 002</p> <p>(Title I Condition: To avoid classification as a major modification under 40 CFR § 52.21 and Minn. R. 7007.3000)</p>	<p>Daily recordkeeping of the time of the start and stop of operation; monthly calculation of 12-month rolling sum.</p>	<p>The combined limit on the two emergency diesel generators ensures that NO<sub>x</sub> emissions remain below PSD levels. Daily recordkeeping is used for tracking usage (when the units are actually operating). Actual hours of operation have been significantly less than the allowed 816 hours, so a relaxed calculation period of a month is appropriate.</p>
	<p>Fuel oil sulfur content limit <math>\leq</math> 0.05 percent by weight.</p> <p>(40 CFR § 72.7(a)(3); Minn. R. 7007.1075)</p>	<p>Fuel Sulfur Content Restriction / Sulfur Dioxide Limit</p>	<p>The fuel oil supplier must provide a certification or other record that the sulfur content of the fuel oil meets the limit. That supplier guarantee can be found in attachment 4 of this TSD.</p> <p>This level of monitoring meets the standard of reasonable precision, reliability, accessibility, and timeliness required by the regulation.</p>

<b>Subject Item*</b>	<b>Requirement (basis)</b>	<b>Monitoring</b>	<b>Discussion</b>
GP 005 (Emergency Engines)	Opacity ≤ 20% once operating temp. is attained.  SO <sub>2</sub> ≤ 0.50 lbs/MMBtu  (Minn. Rule 7011.2300)	None.	It is unlikely that the opacity limit will be exceeded due to the decreased particle formation from the low sulfur content of fuel used.  The potential to emit for SO <sub>2</sub> from the unit is 0.29 lb/MMBtu. Due to the allowable fuel used at the facility it is unlikely to exceed the limit.
	100 hours per calendar year provided for maintenance and testing.  (40 CFR pt. 63, subp. ZZZZ; Minn. R. 7011.8150)	The installation of a non-resettable hour meter will be used to record hours of emergency and non-emergency operations.	These units are only used in emergency situations and routine maintenance so it is unlikely to exceed the operational requirements.
TK 001 (Distillate oil)	Opacity ≤ 20%  (Minn. R. 7011.0715)	None.	The tanks are not expected to generate particulate matter or opacity.

\*Location of the requirement in the permit (e.g., EU, SV, GP, etc.).

### 3.3 Insignificant Activities

Xcel Energy - Inver Hills Generating Pit has several operations which are classified as insignificant activities under the MPCA's permitting rules. These are listed in Appendix B to the permit.

**Table 8. Insignificant Activities**

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
Fuel use: space heaters fueled by propane, less than 420,000 Btu/hr	PM ≤ 0.6 or 0.4 lb/MMBtu, depending on year constructed Opacity ≤ 20% with exceptions (Minn. R. 7011.0510/0515)	For this unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. In addition, these types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Indirect heating equipment with a capacity less than 420,000 Btu/hour, etc.	PM ≤ 0.6 or 0.4, depending on year constructed Opacity ≤ 20% with exceptions (Minn. R. 7011.0510/0515)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirements.

Insignificant Activity	General Applicable Emission limit	Discussion
Brazing, soldering or welding equipment	PM, variable depending on airflow Opacity ≤ 20% (Minn. R. 7011.0710/0715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Individual units with potential emissions less than 2000 lb/year of certain pollutants	PM, variable depending on airflow Opacity ≤ 20% (with exceptions) (Minn. R. 7011.0715 and Minn. R. 7011.0610) or SO <sub>2</sub> ≤ 0.5 lb/MMBtu Opacity ≤ 20% (Minn. R. 7011.2300)	The facility contains temporary engines for various compressors and pumps as well as internal combustion engines burning distillate oil, gasoline, or natural gas. There are also VOC fugitive emissions from solvents (parts washers no longer use solvents), and from pumps, valves, and flanges on the distillate oil forwarding system/loading rack. Due to the limited use and size of the engines (<250hp) it is unlikely that these units will exceed the requirements.
Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source	PM, variable depending on airflow or process weight rate Opacity ≤ 20% (Minn. R. 7011.0715)	While spray equipment will have the potential to emit particulate matter, these particular activities are those not associated with production, so they would be infrequent and usually occur outdoors. Testing or monitoring is not feasible.
Various small fuel oil tanks that do not have a tankage capacity of more than 10,000 gallons	There are no standards of performance promulgated in this part for storage vessels with a storage capacity of 2,000 gallons or less.  (Minn. R. 7011.1505)	Based on the capacity of the tanks and total throughput, it is highly unlikely that they could violate the applicable requirement or that testing would be feasible.

### 3.4 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. The permit conditions are placed at the group level. Group 001 includes the six electric generating combustion turbines (six emission units). Group 002 includes the two emergency diesel generators.

In addition, there are two appendices to the permit. (Appendix A is reserved for the Operator's Summary which is not used with this permit.) Appendix B contains a listing of the Insignificant Activities at the facility. Appendix C records the New Unit Exemptions from the requirements of the Acid Rain program for Emission Units EU007 and EU008 (See 40 CFR § 72.7 for more information), and Appendix C contains the modeling parameters associated with the stacks for each of the electric generating combustion turbines (i.e., the stacks for the members of Group 1.)



### **3.5 Comments Received**

Public Notice Period: 06/02/2014 - 07/01/2014

EPA 45-day Review Period: 06/02/2014 - 07/16/2014

Comments were not received from the public during the public notice period.

Comments were not received from the EPA during their review period. Changes to the permit were not made as a result of the comments.

### **4. Permit Fee Assessment**

This permit action is the reissuance of an individual Part 70; therefore, no application fees apply under Minn. R. 7002.0016, subp. 1.

### **5. Conclusion**

Based on the information provided by Northern States Power dba Xcel Energy, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03700015-004 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:

- Robert Little (permit engineer)
- Brent Rohne (enforcement)
- Marc Severin (compliance)
- Dick Cordes (peer reviewer)
- Beckie Olson (permit writing assistant)
- Sandy Simbeck (administrative support)
- Amanda Smith (SIP contact)

AQ File No. 202S; DQ 3467

Attachments:

1. Facility Emissions Summary
2. Facility Description and CD-01 Forms
3. Points Calculator
4. Supplier Guarantee



**Xcel Energy – Inver Hills Generating Plant  
03700015-004**

**Attachment 1  
Facility Emissions Summary**

Shaded areas are worst case pollutant for both fuel types.

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited to Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	
NOx	977.00	MMBtu/hr	3.53E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	344.88	1510.58		1510.58	NA	
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
SOx	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	NA	
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	
NOx	923.00	MMBtu/hr	6.42E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	592.57	2595.44		2595.44	NA	
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
SOx	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	less than or equal to 0.5 lb/MMBtu	
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
1,3 Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	
Nickel	923.00	MMBtu/hr	4.60E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.16		0.16	NA	
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	
CO <sub>2</sub>	977.00	mmBtu/hr	1.32E-03	lb/mmBtu	40 CFR 98, Subpart C, Table C-1	1.29E+00	5.65E+00		5.65E+00	5.65E+00	None
CH <sub>4</sub>	977.00	mmBtu/hr	2.20E-03	lb/mmBtu	40 CFR 98, Subpart C, Table C-2	2.15E+00	9.41E+00		9.41E+00	9.41E+00	None
N <sub>2</sub> O	977.00	mmBtu/hr	2.20E-04	lb/mmBtu	40 CFR 98, Subpart C, Table C-2	2.15E-01	9.41E-01		9.41E-01	9.41E-01	None
Total GHG											
CO <sub>2</sub>	923.00	mmBtu/hr	1.63E+02	lb/mmBtu	40 CFR 98, Subpart C, Table C-1	1.50E+05	6.58E+05		6.58E+05	6.58E+05	None
CH <sub>4</sub>	923.00	mmBtu/hr	6.60E-03	lb/mmBtu	40 CFR 98, Subpart C, Table C-2	6.09E+01	2.67E+01		2.67E+01	2.67E+01	None
N <sub>2</sub> O	923.00	mmBtu/hr	1.32E-03	lb/mmBtu	40 CFR 98, Subpart C, Table C-2	1.22E+00	5.34E+00		5.34E+00	5.34E+00	None

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Shaded areas are worst case pollutant for both fuel types.

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Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	
NOx	977.00	MMBtu/hr	3.28E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	320.46	1403.60		1403.60	NA	
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
SOx	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	816 hours (EU007 & EU008 combined)	
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	
NOx	923.00	MMBtu/hr	5.95E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	549.19	2405.43		2405.43	NA	
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA Jrs (EU007 & EU008 combined)	
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
SOx	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	2041.58 lb/MMBtu	
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
1,3-Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	
Nickel	923.00	MMBtu/hr	4.60E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.16		0.16	NA	
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO <sub>2</sub>	977.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.29E+00	5.65E+00		5.65E+00	5.65E+00	None
CH <sub>4</sub>	977.00	mmbtu/hr	2.20E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E+00	9.41E+00		9.41E+00	9.41E+00	None
N <sub>2</sub> O	977.00	mmbtu/hr	2.20E-04	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E-01	9.41E-01		9.41E-01	9.41E-01	None
Total GHG											

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO <sub>2</sub>	923.00	mmbtu/hr	1.63E+02	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.50E+05	6.58E+05		6.58E+05	6.58E+05	None

GW



Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	NA
NOX	977.00	MMBtu/hr	3.54E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	345.86	1514.86		1514.86	NA	NA
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
SOX	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	NA	NA
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	NA
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	NA
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	NA
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	NA
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	NA
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	NA
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	NA
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	NA
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	NA
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	NA
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	NA
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	NA
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	NA
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	NA
NOX	923.00	MMBtu/hr	6.32E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	583.34	2555.01		2555.01	NA	NA
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
SOX	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	2041.58	less than or equal to 0.5 lb/MMBtu
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	NA
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	NA
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	NA
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	NA
1,3 Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	NA
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	NA
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	NA
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	NA
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	NA
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	NA
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	NA
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	NA
Nickel	923.00	MMBtu/hr	4.60E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	NA
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.16		0.16	NA	NA
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	NA
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	NA

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO <sub>2</sub>	977.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.29E+00	5.65E+00		5.65E+00	5.65E+00	None
CH <sub>4</sub>	977.00	mmbtu/hr	2.20E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E+00	9.41E+00		9.41E+00	9.41E+00	None
N <sub>2</sub> O	977.00	mmbtu/hr	2.20E-04	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E-01	9.41E-01		9.41E-01	9.41E-01	None
Total GHG											
CO <sub>2</sub>	923.00	mmbtu/hr	1.63E+02	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.50E+05	6.58E+05		6.58E+05	6.58E+05	None
CH <sub>4</sub>	923.00	mmbtu/hr	6.60E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	6.09E+00	2.67E+01		2.67E+01	2.67E+01	None
N <sub>2</sub> O	923.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	1.22E+00	5.34E+00		5.34E+00	5.34E+00	None
Total GHG											

GWP

GWP

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	NA
NOX	977.00	MMBtu/hr	3.59E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	350.74	1536.25		1536.25	NA	NA
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	NA
SOx	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	NA	NA
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	NA
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	NA
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	NA
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	NA
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	NA
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	NA
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	NA
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	NA
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	NA
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	NA
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	NA
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	NA
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	NA
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	NA
NOx	923.00	MMBtu/hr	6.24E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	575.95	2522.67		2522.67	NA	NA
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	NA
SOx	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	2041.58	less than or equal to 0.5 lb/MMBtu
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	NA
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	NA
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	NA
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	NA
1,3 Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	NA
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	NA
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	NA
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	NA
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	NA
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	NA
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	NA
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	NA
Nickel	923.00	MMBtu/hr	4.60E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	NA
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.16		0.16	NA	NA
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	NA
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	NA

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO <sub>2</sub>	977.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.29E+00	5.65E+00		5.65E+00	5.65E+00	None
CH <sub>4</sub>	977.00	mmbtu/hr	2.20E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E+00	9.41E+00		9.41E+00	9.41E+00	None
N <sub>2</sub> O	977.00	mmbtu/hr	2.20E-04	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E-01	9.41E-01		9.41E-01	9.41E-01	None
Total GHG											
CO <sub>2</sub>	923.00	mmbtu/hr	1.63E+02	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.50E+05	6.58E+05		6.58E+05	6.58E+05	None
CH <sub>4</sub>	923.00	mmbtu/hr	6.60E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	6.09E+00	2.67E+01		2.67E+01	2.67E+01	None
N <sub>2</sub> O	923.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	1.22E+00	5.34E+00		5.34E+00	5.34E+00	None
Total GHG											

GWP

GWP



Shaded areas are worst case pollutant for both fuel types.

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	
NOx	977.00	MMBtu/hr	3.69E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	360.51	1579.05		1579.05	NA	
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
SOx	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	NA	
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	
NOx	923.00	MMBtu/hr	6.45E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	595.34	2607.57		2607.57	NA	
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
SOx	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	2041.58	less than or equal to 0.5 lb/MMBtu
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
1,3 Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	
Nickel	923.00	MMBtu/hr	4.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.04	0.16		0.16	NA	
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	

	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total GHG	GWP	
	977.00	977.00	977.00		1	40 CFR
	977.00	977.00	977.00		25	40 CFR
	977.00	977.00	977.00		298	40 CFR

	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total GHG	GWP	
	923.00	923.00	923.00		1	40 CFR
	923.00	923.00	923.00		25	40 CFR
	923.00	923.00	923.00		298	40 CFR

Shaded areas are worst case pollutant for both fuel types.

Pollutant	Max Process Rate	Process Rate Units	Emission Factor	Emission Factor Units	Emission Factor Source	Emission Rate (lb/hr)	Uncontrolled Potential to Emit (ton/yr)	Pollution Control Efficiency (%)	Controlled Potential to Emit (ton/yr)	Limited Potential to Emit (ton/yr)	Existing Permit Limit
CO	977.00	MMBtu/hr	2.00E-03	lb/10 <sup>6</sup> Btu	August 1, 2000 Stack Test	1.95	8.56		8.56	NA	
NOx	977.00	MMBtu/hr	3.65E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	356.61	1561.93		1561.93	NA	
PM	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM10	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
PM2.5	977.00	MMBtu/hr	6.60E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	6.45	28.24		28.24	NA	
SOx	977.00	MMBtu/hr	1.32E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.13	0.56		0.56	NA	
Total VOC	977.00	MMBtu/hr	2.10E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	2.05	8.99		8.99	NA	
Acetaldehyde	977.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.17		0.17	NA	
Acrolein	977.00	MMBtu/hr	6.40E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.03		0.03	NA	
Benzene	977.00	MMBtu/hr	1.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.01	0.05		0.05	NA	
1,3 Butadiene	977.00	MMBtu/hr	4.30E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.00		0.00	NA	
Ethylbenzene	977.00	MMBtu/hr	3.20E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.14		0.14	NA	
Formaldehyde	977.00	MMBtu/hr	7.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.69	3.04		3.04	NA	
Naphthalene (PAH)	977.00	MMBtu/hr	1.30E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
PAHs	977.00	MMBtu/hr	2.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.00	0.01		0.01	NA	
Propylene Oxide	977.00	MMBtu/hr	2.90E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.03	0.12		0.12	NA	
Toluene	977.00	MMBtu/hr	1.30E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.13	0.56		0.56	NA	
Xylenes	977.00	MMBtu/hr	6.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.06	0.27		0.27	NA	
Total HAPs (NG)	977.00	MMBtu/hr	1.03E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.00	4.40		4.40	NA	
CO	923.00	MMBtu/hr	3.30E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-1	3.05	13.34		13.34	NA	
NOx	923.00	MMBtu/hr	6.57E-01	lb/10 <sup>6</sup> Btu	November 2007 Stack Test	606.41	2656.08		2656.08	NA	
PM	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM10	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
PM2.5	923.00	MMBtu/hr	1.20E-02	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	11.08	48.51		48.51	NA	
SOx	923.00	MMBtu/hr	5.05E-01	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	466.12	2041.58		2041.58	2041.58 lb/MMBtu	less than or equal to 0.5
Total VOC	923.00	MMBtu/hr	4.10E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-2	0.38	1.66		1.66	NA	
Arsenic	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Benzene	923.00	MMBtu/hr	5.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.05	0.22		0.22	NA	
Beryllium	923.00	MMBtu/hr	3.10E-07	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
1,3 Butadiene	923.00	MMBtu/hr	1.60E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.01	0.06		0.06	NA	
Cadmium	923.00	MMBtu/hr	4.80E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
Chromium	923.00	MMBtu/hr	1.10E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.04		0.04	NA	
Formaldehyde	923.00	MMBtu/hr	2.80E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.26	1.13		1.13	NA	
Lead	923.00	MMBtu/hr	1.40E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.01	0.06		0.06	NA	
Manganese	923.00	MMBtu/hr	7.90E-04	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.73	3.19		3.19	NA	
Mercury	923.00	MMBtu/hr	1.20E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.00		0.00	NA	
Naphthalene (PAH)	923.00	MMBtu/hr	3.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-4	0.03	0.14		0.14	NA	
Nickel	923.00	MMBtu/hr	4.60E-06	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.00	0.02		0.02	NA	
PAHs	923.00	MMBtu/hr	4.00E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	0.04	0.16		0.16	NA	
Selenium	923.00	MMBtu/hr	2.50E-05	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-5	0.02	0.10		0.10	NA	
Total HAPs (Oil)	977.00	MMBtu/hr	1.29E-03	lb/10 <sup>6</sup> Btu	AP-42 Table 3.1-3	1.26	5.51		5.51	NA	
CO <sub>2</sub>	977.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.29E+00	5.65E+00		5.65E+00	5.65E+00	None
CH <sub>4</sub>	977.00	mmbtu/hr	2.20E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E+00	9.41E+00		9.41E+00	9.41E+00	None
N <sub>2</sub> O	977.00	mmbtu/hr	2.20E-04	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	2.15E-01	9.41E-01		9.41E-01	9.41E-01	None
Total GHG											GWP
CO <sub>2</sub>	923.00	mmbtu/hr	1.63E+02	lb/mmbtu	40 CFR 98, Subpart C, Table C-1	1.50E+05	6.58E+05		6.58E+05	6.58E+05	None
CH <sub>4</sub>	923.00	mmbtu/hr	6.60E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	6.09E+00	2.67E+01		2.67E+01	2.67E+01	None
N <sub>2</sub> O	923.00	mmbtu/hr	1.32E-03	lb/mmbtu	40 CFR 98, Subpart C, Table C-2	1.22E+00	5.34E+00		5.34E+00	5.34E+00	None
Total GHG											GWP

CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	Total GHG
1	25	298	





**Xcel Energy - Inver Hills Generating Plant  
Criteria and Hazardous Air Pollutants**

Tanks                      VOCs  
TK 002                      See Tanks 4.0 print out  
TK 003  
TK 004

Added from Xcel response:

<b>Delta ID</b>	<b>Description</b>	<b>Working Loss (lbs)</b>	<b>Breathing Loss (lbs)</b>	<b>Total Emissions (lbs)</b>
TK 001	IH Tank #2	267.77	2067.56	2335.33

**Xcel Energy – Inver Hills Generating Plant  
03700015-004**

**Attachment 2  
Facility Description and CD-01 Forms**



**FACILITY DESCRIPTION: EMISSION UNIT (EU)**

Show: All Records

Action:

AQD Facility ID: 03700015

Facility Name: Xcel Energy - Inver Hills Generating Pit

ID No.	Emission Unit Status	Added By (Action)	Retired By (Action)	Insignificant Activity	Operator ID for Item	Stack/Vent ID No(s)	Control Equip. ID No(s)	Operator Description	Manufacturer	Model Number	SIC	Max. Design Capacity	Maximum Design Capacity		Max Fuel Input (mil Btu)	
													Materials	Units n		Units d
1 EU 001	Active	PER 001		<input type="checkbox"/>		SV 001 (M)		Combustion Turbine 1	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
2 EU 002	Active	PER 001		<input type="checkbox"/>		SV 002 (M)		Combustion Turbine 2	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
3 EU 003	Active	PER 001		<input type="checkbox"/>		SV 003 (M)		Combustion Turbine 3	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
4 EU 004	Active	PER 001		<input type="checkbox"/>		SV 004 (M)		Combustion Turbine 4	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
5 EU 005	Active	PER 001		<input type="checkbox"/>		SV 005 (P)		Combustion Turbine 5	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
6 EU 006	Active	PER 001		<input type="checkbox"/>		SV 006 (M)		Combustion Turbine 6	General Electric	7001B	4911	977	Heat	Mmbtu	Hr	977
7 EU 007	Active	PER 001	PER 001	<input type="checkbox"/>		SV 007 (M)		Diesel Generator 1 ODG-GEN-001	Caterpillar	3516TA	4911	121		Gal	Hr	16.81
8 EU 007	Active	PER 003		<input type="checkbox"/>		SV 007 (M)		Diesel Generator 1 ODG-GEN-001	Caterpillar	3516TA	4911	121		Gal	Hr	16.81
9 EU 008	Active	PER 001	PER 001	<input type="checkbox"/>		SV 008 (M)		Diesel Generator 2 ODG-GEN-002	Caterpillar	3516TA	4911	121		Gal	Hr	16.81
10 EU 008	Active	PER 003		<input type="checkbox"/>		SV 008 (M)		Diesel Generator 2 ODG-GEN-002	Caterpillar	3516TA	4911	121		Gal	Hr	16.81
11 EU 009	Active	PER 004		<input type="checkbox"/>				Fire Pump diesel engine			4911	6.3		Gal	Hr	.864
12 EU 010	Active	PER 004		<input type="checkbox"/>				Substation black start diesel generator			4911	2.78		Gal	Hr	.381

**FACILITY DESCRIPTION: EMISSION UNIT (EU)**

ID No.	Emission Unit Status	Added By (Action)	Commence Const. Date	Initial Startup Date	Removal Date	Firing Method	Pct. Fuel/Space Heat	Bottleneck	Elevator Type
1	Active	PER 001	01/01/1971	01/01/1972					
2	Active	PER 001	01/01/1971	01/01/1972					
3	Active	PER 001	01/01/1971	01/01/1972					
4	Active	PER 001	01/01/1971	01/01/1972					
5	Active	PER 001	01/01/1971	01/01/1972					
6	Active	PER 001	01/01/1971	01/01/1972					
7	Active	PER 001	03/21/1996						
8	Active	PER 003	03/21/1996	07/01/1996					
9	Active	PER 001	03/21/1996						
10	Active	PER 003	03/21/1996	07/01/1996					
11	Active	PER 004							
12	Active	PER 004							





# COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item: Total Facility**

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	SOURCE SPECIFIC REQUIREMENTS
2.0		CD	Minn. R. 7007.0800, subp. 2	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.
3.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7009.0020	Parameters Used in Modeling: The stack heights, emission rates, and other parameters used in the modeling for the SO2 SIP are listed in Appendix C of this permit. The Permittee must submit to the Commissioner for approval any revisions of these parameters and must wait for a written approval before making such changes. The information submitted must include, at a minimum, the locations, heights and diameters of the stacks, locations and dimensions of nearby buildings, the velocity and temperatures of the gases emitted, and the emission rates. The plume dispersion characteristics due to the revisions of the information must be equivalent to or better than the dispersion characteristics modeled in the SO2 SIP submittal. The Permittee shall demonstrate this equivalency in the proposal. 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.
4.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	State Implementation Plan Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of the required monitoring, sample, measurement, or report that corresponds with the "Title I Condition: SIP for SO2 NAAQS" requirement.
5.0		S/A	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Quarterly Report: due 30 days after end of each calendar quarter starting 07/28/1992. The report shall contain the following: 1) The percent sulfur content by weight and the heating value of the fuel oil in million British Thermal Units per gallon; 2) Summary of any exceedances of the emission limitation, monthly fuel use limitation and the sulfur content limitation during the calendar quarter. The report shall provide an explanation of each exceedance which occurred or a statement stating that no exceedances occurred. The report shall also state if fuel oil was burned during the monitored quarter.
6.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Quarterly Report for the State Implementation Plan for Sulfur Dioxide:  Not more than 30 days after the end of each calendar quarter starting 07/28/1992, the Permittee shall submit a report containing the following information:  1) The percent sulfur content by weight and the heating value of the fuel oil in million British Thermal Units per gallon; and  2) A summary of any exceedances of the emission limitation, monthly fuel use limitation and the sulfur content limitation during the calendar quarter. The report shall provide an explanation of each exceedance which occurred or a statement stating that no exceedances occurred. The report shall also state if fuel oil was burned during the monitored quarter.
7.0		CD	Minn. R. 7007.0800, subp. 6(C)1; Alternative to SIP Quarterly Report.	Deviations from requirements cited as "Title I Condition: SIP for SO2 NAAQS" shall be reported semi-annually with the Semi-annual Deviations Report required by this permit. Reporting shall occur even if there were no deviations for this reporting period.
8.0		CD	hdr	DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NSR
9.0		CD	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2	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 52.21(r)(6)(vi)(b).  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.



## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

10.0		CD	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	<p>Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following:</p> <ol style="list-style-type: none"> <li>1. Project description</li> <li>2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected</li> <li>3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU.</li> <li>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.</li> </ol> <p>The Permittee shall maintain records of this documentation.</p>
11.0		CD	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5	<p>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.</p>
12.0		CD	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5	<p>The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if 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:</p> <ol style="list-style-type: none"> <li>a. The name and ID number of the facility, and the name and telephone number of the facility contact person</li> <li>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 increase are exceeded.</li> <li>c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.</li> </ol>
13.0		CD	hdr	OPERATIONAL REQUIREMENTS
14.0		CD	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080	<p>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.</p>
15.0		CD	Minn. R. 7011.0020	<p>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.</p>
16.0		CD	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)	<p>Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.</p>
17.0		CD	Minn. R. 7007.0800, subps. 14 and 16(J)	<p>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 &amp; 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.</p>



## COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

18.0		CD	Minn. R. 7019.1000, subp. 4	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.
19.0		CD	Minn. R. 7011.0150	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.
20.0		CD	Minn. R. 7030.0010 - 7030.0080	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.
21.0		CD	Minn. R. 7007.0800, subp. 9(A)	Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).
22.0		CD	Minn. R. 7007.0800, subp. 16	The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.
23.0		CD	hdr	PERFORMANCE TESTING
24.0		CD	Minn. R. ch. 7017	Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.
25.0		CD	Minn. R. 7017.2018; Minn. R. 7017.2030, subps. 1-4, Minn. R. 7017.2035, subps. 1-2	<p>Performance Test Notifications and Submittals:</p> <p>Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.</p> <p>Performance Test Notification (written): due 30 days before each Performance Test</p> <p>Performance Test Plan: due 30 days before each Performance Test</p> <p>Performance Test Pre-test Meeting: due 7 days before each Performance Test</p> <p>Performance Test Report: due 45 days after each Performance Test</p> <p>Performance Test Report - Microfiche Copy: due 105 days after each Performance Test</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>
26.0		CD	Minn. R. 7017.2025, subp. 3	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.
27.0		CD	hdr	MONITORING REQUIREMENTS
28.0		CD	Minn. R. 7007.0800, subp. 4(D)	<p>Monitoring Equipment Calibration - The Permittee shall either:</p> <ol style="list-style-type: none"> <li>1. Calibrate or replace required monitoring equipment every 12 months; or</li> <li>2. Calibrate at the frequency stated in the manufacturer's specifications.</li> </ol> <p>For each monitor, the Permittee shall maintain a record of all calibrations, including the date conducted, and any corrective action that resulted. The Permittee shall include the calibration frequencies, procedures, and manufacturer's specifications (if applicable) in the Operations and Maintenance Plan. Any requirements applying to continuous emission monitors are listed separately in this permit.</p>
29.0		CD	Minn. R. 7007.0800, subp. 4(D)	Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.
30.0		CD	hdr	RECORDKEEPING



## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

31.0		CD	Minn. R. 7007.0800, subp. 5(C)	Recordkeeping: Retain all records at the stationary source, unless otherwise specified within this permit, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).
32.0		CD	Minn. R. 7007.0800, subp. 5(B)	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.
33.0		CD	Minn. R. 7007.1200, subp. 4	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.
34.0		CD	hdr	REPORTING/SUBMITTALS
35.0		CD	Minn. R. 7019.1000, subp. 3	Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.  At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.
36.0		CD	Minn. R. 7019.1000, subp. 2	Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.  At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.
37.0		CD	Minn. R. 7019.1000, subp. 1	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.
38.0		CD	Minn. R. 7019.1000, subp. 1	Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: <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>
39.0		S/A	Minn. R. 7007.0800, subp. 6(A)(2)	Semiannual Deviations Report: due 30 days after end of each calendar half-year following Permit Issuance. 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.



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Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

40.0		CD	Minn. R. 7007.1150 - 7007.1500	Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.
41.0		CD	Minn. R. 7007.0400, subp. 2	Application for Permit Reissuance: due 180 days before expiration of existing permit.
42.0		CD	Minn. R. 7007.1400, subp. 1(H)	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). Performance testing deadlines from the General Provisions of 40 CFR pt. 60 and pt. 63 are examples of deadlines for which the MPCA does not have authority to grant extensions and therefore do not meet the requirements of Minn. R. 7007.1400, subp. 1(H).
43.0		S/A	Minn. R. 7007.0800, subp. 6(C)	Compliance Certification: due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Permittee shall submit this to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.
44.0		CD	Minn. R. 7019.3000 - 7019.3100	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.
45.0		CD	Minn. R. 7002.0005 - 7002.0095	Emission Fees: due 30 days after receipt of an MPCA bill.



# COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** GP 001 Electric Generating Combustion Turbines

- Associated Items:**
- EU 001 Combustion Turbine 1
  - EU 002 Combustion Turbine 2
  - EU 003 Combustion Turbine 3
  - EU 004 Combustion Turbine 4
  - EU 005 Combustion Turbine 5
  - EU 006 Combustion Turbine 6

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	The requirements of this group apply individually to each associated item in this group unless specified.
2.0		CD	hdr	EMISSION AND OPERATIONAL REQUIREMENTS
3.0		LIMIT	Minn. R. 7011.2300, subp. 1	Opacity: less than or equal to 20 percent once operating temperatures have been attained.
4.0		LIMIT	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.2300, subp. 2	Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input
5.0		LIMIT	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2	Sulfur Content of Fuel: less than or equal to 0.48 percent by weight for all fuels.  (Compliance with this limit demonstrates compliance with the 0.50 lb SO2/million BTU limit.)  THIS LIMIT WILL BE TERMINATED ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.
6.0		LIMIT	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2	Sulfur Content of Fuel: less than or equal to 0.005 percent by weight for all fuels.  (Compliance with this limit demonstrates compliance with the 0.50 lb SO2/million BTU limit.)  THIS CONDITION WILL BECOME EFFECTIVE ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.
7.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 2	Allowable Fuel Types: Distillate fuel oil and natural gas.
8.0		LIMIT	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	Total Combined Distillate Fuel Usage: less than or equal to 9.41 million gallons/month using 12-month Rolling Average
9.0		CD	hdr	MONITORING REQUIREMENTS
10.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	THIS CONDITION WILL BE TERMINATED ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.  Fuel Oil Analysis:  The Permittee shall obtain the fuel oil sulfur content and heating value by one of the following methods:  METHOD A. By sampling and analyzing the fuel in accordance to the following:  1) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;  2) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;



# COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

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11.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>3) If the fuel delivery sample analysis result is no greater than 0.48% sulfur, the Permittee shall compute a weighted average sulfur content of the fuel in the tank using the analysis from the fuel delivery sample and any previous value for sulfur content of fuel in the tank.</p> <p>4) If the delivery sample analysis result is greater than 0.48% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p> <p>5) In January and July of each year, the Permittee shall collect a sample from the fuel line to the gas turbines. The sample shall be analyzed for sulfur content and heating value. The results shall be used as the new sulfur content and heating value of the fuel in the tank.</p> <p>OR,</p> <p>METHOD B. By limiting fuel oil sulfur content to 0.10% by weight. The sulfur content will be assured by:</p>
12.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>1) Obtaining and retaining a guarantee from the fuel supplier indicating that each shipment of fuel oil delivered to the Facility will not contain more that 0.48 percent by weight; and by</p> <p>2) Sampling and analyzing the fuel in accordance with the following:</p> <p>a) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>b) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>
13.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>c) If any delivery sample analysis result is greater than 0.48% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p>
14.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>THIS CONDITION WILL BECOME EFFECTIVE ON THE DATE THE USEPA APPROVES THE REVISION TO THE SIP.</p> <p>Fuel Oil Analysis:</p> <p>The Permittee shall obtain the fuel oil sulfur content and heating value by one of the following methods:</p> <p>METHOD A. By sampling and analyzing the fuel in accordance to the following:</p> <p>1) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>2) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>



## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

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15.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>3) If the fuel delivery sample analysis result is no greater than 0.005% sulfur, the Permittee shall compute a weighted average sulfur content of the fuel in the tank using the analysis from the fuel delivery sample and any previous value for sulfur content of fuel in the tank.</p> <p>4) If the delivery sample analysis result is greater than 0.005% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p> <p>5) In January and July of each year, the Permittee shall collect a sample from the fuel line to the gas turbines. The sample shall be analyzed for sulfur content and heating value. The results shall be used as the new sulfur content and heating value of the fuel in the tank.</p> <p>OR,</p> <p>METHOD B. By limiting fuel oil sulfur content to 0.0015% by weight. The sulfur content will be assured by:</p>
16.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>1) Obtaining and retaining a guarantee from the fuel supplier indicating that each shipment of fuel oil delivered to the Facility will not contain more that 0.0015 percent by weight; and by</p> <p>2) Sampling and analyzing the fuel in accordance with the following:</p> <p>a) While the fuel tank is being filled, the Permittee shall collect a sample of the fuel delivery in accordance with ASTM Method D-4057 or other EPA approved method;</p> <p>b) The Permittee shall analyze fuel delivery samples to determine the sulfur content in accordance with ASTM Method D-1552 or other approved EPA method and heating value of the fuel in accordance with ASTM Method D-240, D-1989 or other approved EPA method;</p>
17.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP	<p>Fuel Oil Analysis (cont.)</p> <p>c) If any delivery sample analysis result is greater than 0.0015% sulfur, then a sample must be taken from the fuel tank and analyzed for sulfur content and heating value. The Permittee shall use the tank analysis as the new sulfur content and heating value of the fuel in the tank.</p>
18.0	CD	hdr	RECORDKEEPING
19.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)	Fuel Supplier Certification or Guarantee: Keep on site a copy of the fuel supplier certification or guarantee identifying the type of fuel oil and the percent by weight sulfur content range.
20.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)	Daily Recordkeeping: On each day of operation, the Permittee shall record the total quantity of all fuel used at the facility. This shall be based on flowmeters.
21.0	CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 4(B)	Fuel Usage Recordkeeping: By the 15th day of each month, the Permittee shall use daily fuel usage records to calculate the monthly fuel usage on a 12-month rolling average basis.





## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

22.0		CD	Title I Condition: SIP for SO2 NAAQS, 40 CFR pt. 50; 40 CFR pt. 52, subp. Y, MN SIP; Minn. R. 7007.0800, subp. 5	<p>SO2, and Emissions and Operating Records.</p> <p>The Permittee shall generate and maintain records containing information to demonstrate compliance with the emission limitation and operating requirements. The Permittee shall retain records containing the following information:</p> <ol style="list-style-type: none"> <li>1) The results of the fuel oil analyses for sulfur content (percent by weight) and heating value (million British Thermal Units per gallon), the date the fuel oil was sampled, and the methods used to sample the fuel oil and determine the sulfur content and heating value of the fuel oil.</li> <li>2) Monthly and 12-month rolling average fuel oil use. The records shall be signed by the person entering information into the record.</li> </ol>
23.0		CD	Minn. R. 7007.0800, subp. 4 and 5	The Permittee shall install, calibrate, maintain and operate flowmeters for all fuel used at the facility.



# COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** GP 002 Emergency Diesel Generators

**Associated Items:** EU 007 Diesel Generator 1 ODG-GEN-001

EU 008 Diesel Generator 2 ODG-GEN-002

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	The requirements of this group apply individually to each associated item in this group, unless specified.
2.0		CD	hdr	EMERGENCY RICE DEFINITION
3.0		CD	40 CFR Section 63.6640(f); Minn. R. 7011.8150	The Permittee shall operate EU 007 and EU 008 according to the requirements in paragraphs 40 CFR Section 63.6640 (f)(1) through (3). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR Section 63.6640(f)(1) through (3), is prohibited. If the engine is not operated according to the requirements in 40 CFR Section 63.6640(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.  (continued below)
4.0		CD	40 CFR Section 63.6640(f)(1) - (2); Minn. R. 7011.8150	(1) There is no time limit on the use of emergency stationary RICE in emergency situations.  (2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR Section 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR Section 63.6640(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
5.0		CD	40 CFR Section 63.6640(f)(2)(i); Minn. R. 7011.8150	2(i) The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
6.0		CD	40 CFR Section 63.6640(f)(2)(ii) - (2)(iii); Minn. R. 7011.8150	2(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see 40 CFR Section 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.  2(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.
7.0		CD	40 CFR Section 63.6640(f)(3); Minn. R. 7011.8150	(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 40 CFR Section 63.6640(f)(2) above. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
8.0		CD	hdr	EMISSION AND OPERATING LIMITS
9.0		LIMIT	Minn. R. 7011.2300, subp. 1	Opacity: less than or equal to 20 percent once operating temperatures have been attained.



## COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

10.0		LIMIT	Minn. R. 7011.2300, subp. 2	Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . The potential to emit from the unit is 0.05 lb/MMBtu due to equipment design and allowable fuels.
11.0		CD	40 CFR Section 72.7(a)(2); Minn. R. 7007.1075; Minn. R. 7005.0100, subp. 35a	Fuel Type: Distillate oil only, by design.
12.0		LIMIT	40 CFR Section 72.7(a)(3); Minn. R. 7007.1075	Sulfur Content of Fuel: less than or equal to 0.05 percent by weight on an annual average.
13.0		LIMIT	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000	Operating Hours: less than or equal to 816 hours/year using 12-month Rolling Sum as a total for GP 002.
14.0		CD	hdr	MONITORING AND RECORDKEEPING
15.0		CD	40 CFR Section 72.7; Minn. R. 7007.0800, subp. 4 and 5	The Permittee shall obtain from the fuel supplier a certificate or other record indicating that the fuel delivered for use in the GP 002 emission units has a sulfur content less then or equal to 0.05 percent by weight on a 12-month annual average.
16.0		CD	40 CFR Section 72.7(d)(3); Minn. R. 7007.1075	Average Annual Sulfur Content Determination  The Permittee shall calculate the annual average sulfur content, as a percentage by weight, using the equation in 40 CFR Section 72.7(d)(2). In lieu of the factor, volume times density, in the equation, the factor, mass (Mn), may be used, where Mn is: mass of the nongaseous fuel in a delivery during the year to the unit of which the nth sample is taken, in lb.  Fuel shall be sampled at least once for every delivery.
17.0		CD	40 CFR Section 72.7(f)(3); Minn. R. 7007.1075	For a period of 5 years from the date the records are created, the Permittee shall retain at the source records demonstrating that the requirements of 40 CFR Section 72.7(a) are met. The 5-year period for keeping records may be extended for cause, at any time prior to the end of the period, in writing by the Administrator or the permitting authority.  (i) Such records shall include, for each delivery of fuel to the unit, the type of fuel, the sulfur content, and the sulfur content of each sample taken. (ii) The Permittee bears the burden of proof that the requirements of 40 CFR Section 72.7(a) are met.
18.0		CD	40 CFR Section 72.7(f)(4)(i); Minn. R. 7007.1075	Loss of exemption. An exempt unit shall be treated as an affected unit under the Acid Rain Program on the earliest of the following dates:  (A) The date on which the unit first serves one or more generators with total nameplate capacity in excess of 25 MWe; (B) The date on which the unit burns any coal or coal-derived fuel except for coal-derived gaseous fuel with a total sulfur content no greater than natural gas; or (C) January 1 of the year following the year in which the annual average sulfur content for nongaseous fuel burned at the unit exceeds 0.05 percent by weight (as determined under 40 CFR Section 72.7(d)).
19.0		CD	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000	For each day of operation of any GP 002 emission unit(s), record the operating start and stop times. By the 15th of each month, calculate and record the total combined GP 002 operating hours for the previous month, and for the previous 12-month period (12-month rolling sum).



# COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** GP 005 Emergency Diesel Engines

**Associated Items:** EU 009 Fire Pump diesel engine

EU 010 Substation black start diesel generator

	NC/CA	Type	Citation	Requirement
1.0		CD	hdr	The requirements of this group apply individually to each associated item in this group.
2.0		CD	hdr	EMISSION AND OPERATIONAL REQUIREMENTS
3.0		LIMIT	Minn. R. 7011.2300, subp. 1	Opacity: less than or equal to 20 percent once operating temperatures have been attained.
4.0		LIMIT	Minn. R. 7011.2300, subp. 2	Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input . The potential to emit from the units is 0.29 lb/MMBtu due to equipment design and allowable fuels.
5.0		CD	40 CFR Section 63.4(b); Minn. R. 7011.7000	<p>Circumvention: The Permittee shall not build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to:</p> <p>(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere or</p> <p>(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions.</p>
6.0		CD	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150	Change oil and filter every 500 hours of operation or annually, whichever comes first. The Permittee has the option of utilizing an oil analysis program in order to extend the oil change requirement as described below.
7.0		CD	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150	Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary.
8.0		CD	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150	Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
9.0		CD	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150	The Permittee shall minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
10.0		CD	40 CFR Section 63.6605(a); Minn. R. 7011.8150	The Permittee shall be in compliance with the emission limitations and operating limitations in this subpart that apply at all times.
11.0		CD	40 CFR Section 63.6605(b); Minn. R. 7011.8150	At all times the Permittee shall operate and maintain EU 009 and EU 010, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the Permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
12.0		CD	40 CFR Section 63.6625(e); Minn. R. 7011.8150	The Permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop a maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.
13.0		CD	40 CFR Section 63.6625(f); Minn. R. 7011.8150	The Permittee shall install a non-resettable hour meter on EU 009 and EU 010 if one is not already installed by the compliance date.
14.0		CD	40 CFR Section 63.6625(h); Minn. R. 7011.8150	The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup apply.



## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

15.0		CD	40 CFR Section 63.6625(i); Minn. R. 7011.8150	<p>The Permittee has the option of utilizing an oil analysis program in order to extend the specified oil change requirement. The oil analysis must be performed at the same frequency specified for changing the oil. The analysis program must at a minimum analyze the following 3 parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5.</p> <p>(continued below)</p>
16.0		CD	40 CFR Section 63.6625(i); Minn. R. 7011.8150	<p>(continued from above)</p> <p>If none of the condemning limits are exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.</p>
17.0		CD	40 CFR Section 63.6640(a); Minn. R. 7011.8150	<p>The Permittee shall demonstrate continuous compliance with each emission limitation and operating limitation in Table 2c of 40 CFR pt. 63, subp. ZZZZ that apply according to methods specified in Table 6 of 40 CFR pt. 63, subp. ZZZZ.</p>
18.0		CD	40 CFR Section 63.6640(a); 40 CFR Section 63.6655(d); 40 CFR pt. 63 subp. ZZZZ, Table 6; Minn. R. 7011.8150	<p>The Permittee shall operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or the Permittee shall develop and follow a maintenance plan which shall provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.</p>
19.0		CD	40 CFR Section 63.6665; 40 CFR pt. 63 subp. ZZZZ, Table 8; Minn. R. 7011.8150	<p>The Permittee shall comply with the General Provisions in 40 CFR Section 63.1 through 63.15, as applicable.</p>
20.0		CD	hdr	<p>REQUIREMENTS FOR EMERGENCY STATIONARY RICE</p>
21.0		CD	40 CFR Section 63.6640(f); Minn. R. 7011.8150	<p>The Permittee shall operate the emergency stationary RICE according to the requirements in paragraphs 40 CFR Section 63.6640 (f)(1) through (4) of 40 CFR Section 63.6640(f). Any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR Section 63.6640(f)(1) through (4), is prohibited. If the engine is not operated according to the requirements in 40 CFR Section 63.6640(f)(1) through (4), the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.</p>
22.0		CD	40 CFR Section 63.6640(f)(1) - (2); Minn. R. 7011.8150	<p>(1) There is no time limit on the use of emergency stationary RICE in emergency situations.</p> <p>(2) The Permittee may operate the emergency stationary RICE for any combination of the purposes specified in 40 CFR Section 63.6640(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR Section 63.6640(f)(3) and (4) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).</p>
23.0		CD	40 CFR Section 63.6640(f)(2)(i); Minn. R. 7011.8150	<p>The Permittee may operate the emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indication that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year.</p>



## COMPLIANCE PLAN CD-01

Facility Name: Xcel Energy - Inver Hills Generating Plt

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24.0	CD	40 CFR Section 63.6640(f)(2)(ii) - (2)(iii); Minn. R. 7011.8150	<p>2(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see Section 63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.</p> <p>2(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.</p>
25.0	CD	40 CFR Section 63.6640(f)(3); Minn. R. 7011.8150	The Permittee may operate the emergency stationary RICE up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing and emergency demand response provided in 40 CFR Section 63.6640(f)(2). The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
26.0	CD	hdr	RECORDKEEPING REQUIREMENTS
27.0	CD	40 CFR Section 63.10(b)(1); Minn. R. 7019.0100, subp. 2(B)	<p>The Permittee shall maintain files of all information required by 40 CFR pt. 63 in a form suitable and readily available for expeditious inspection and review.</p> <p>The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Except that the most recent 2 years of data do not have to be retained on site.</p>
28.0	CD	40 CFR Section 63.6655(d); Minn. R. 7011.8150	The Permittee shall keep the records required in Table 6 of 40 CFR pt 63, subp. ZZZZ, to show continuous compliance with each emission or operating limitation that applies.
29.0	CD	40 CFR Section 63.6655(e); Minn. R. 7011.8150	The Permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the Permittee operated and maintained the stationary RICE and after-treatment control device (if any) according to the maintenance plan.
30.0	CD	40 CFR Section 63.6655(f); Minn. R. 7011.8150	The Permittee shall keep records of the hours of operation of the engine that are recorded through the non-resettable hour meter. The Permittee shall document how many hours are spent for emergency operation; including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for demand response operation, the Permittee shall keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.
31.0	CD	40 CFR Section 63.6660; 40 CFR Section 63.10(b)(1); Minn. R. 7011.8150; Minn R. 7019.0100, subp. 2(B)	<p>The Permittee shall maintain all records in a form suitable and readily available for expeditious review according to 40 CFR Section 63.10(b)(1).</p> <p>As specified in 40 CFR Section 63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.</p> <p>The Permittee shall keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR section 63.10(b)(1).</p>
32.0	CD	hdr	REPORTING AND NOTIFICATION REQUIREMENTS
33.0	CD	40 CFR Section 63.6640(b); Minn. R. 7011.8150	The Permittee shall report each instance in which the stationary RICE did not meet each applicable emission limitation or operating limitation. These instances are deviations from the emission and operating limitations. These deviations shall be reported according to the requirements in 40 CFR Section 63.6650.
34.0	CD	40 CFR Section 63.6640(e); 40 CFR pt. 63, subp. ZZZZ, Table 8; Minn. R. 7011.8150	The Permittee shall report each instance when the applicable requirements in Table 8 of 40 CFR pt. 63, subp. ZZZZ were not met.



## COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

35.0		CD	40 CFR Section 63.6602; 40 CFR pt. 63, subp. ZZZZ, Table 2c; Minn. R. 7011.8150	The Permittee shall report any failure to perform the work practice on the schedule required in 40 CFR pt. 63, Table 2c due to an emergency or an unacceptable risk under Federal, State or local law. The work practice shall be performed as soon as practicable after the emergency has ended or the unacceptable risk under Federal, State, or local law has abated.
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# COMPLIANCE PLAN **CD-01**

Facility Name: Xcel Energy - Inver Hills Generating Plt

Permit Number: 03700015 - 004

**Subject Item:** TK 001 distillate oil

	NC/ CA	Type	Citation	Requirement
1.0		CD	hdr	EMISSION AND OPERATIONAL LIMITS
2.0		CD	Minn. R. 7011.0715, subp. 1(B)	Opacity: less than or equal to 20 percent opacity.



**Xcel Energy – Inver Hills Generating Plant  
03700015-004**

**Attachment 3  
Points Calculator**

# Points-Based Fee Calculator

1) AQ Facility ID No.: 03700015  
 2) Facility Name: Xcel Energy - Inver Hills Generating Plant  
 3) Small business? y/n? No  
 4) DQ Numbers (including all rolled) : 3467  
 5) Date of each Application Received: 12/12/2013  
 6) Final Permit No. 03700015-004  
 7) Permit Staff Robert Little  
 8) "Work completed" in which .xls file (i.e. unit 2b, unit 1a, biofuels)? No

<b>Total Points</b>	<b>0</b>
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<u>Application Type</u>	<u>DQ No.</u>	<u>Qty.</u>	<u>Points</u>	<u>Total Points</u>	<u>Details</u>
Administrative Amendment			1	0	
Minor Amendment			4	0	
Applicability Request			10	0	
Moderate Amendment			15	0	
Major Amendment			25	0	
Individual State Permit - First Time			50	0	
Individual Part 70 Permit - First Time			75	0	

**Additional Points**

Modeling Review			15	0	
BACT Review			15	0	
LAER Review			15	0	
CAIR/Part 75 CEM analysis			10	0	
NSPS Review			10	0	
NESHAP Review			10	0	
Case-by-case MACT Review			20	0	
Netting			10	0	
Limits to remain below threshold			10	0	
Plantwide Applicability Limit (PAL)			20	0	
AERA review			15	0	
Variance request under 7000.7000			35	0	
Confidentiality request under 7000.1300			2	0	
<b><u>EAW review</u></b>					
Part 4410.4300, subparts 18, item A; and 29			15	0	
Part 4410.4300, subparts 8, items A & B; 10, items A to C; 16, items A & D; 17, items A to C & E to G; and 18, items B & C			35	0	
Part 4410.4300, subparts 4; 5 items A & B; 13; 15; 16, items B & C; and 17 item D			70	0	

NOTES:

**Xcel Energy – Inver Hills Generating Plant  
03700015-004**

**Attachment 4  
Supplier Guarantee**



**FLINT HILLS**  
resources®

January 1, 2014

Mr. Craig Rozman  
Northern States Power/Xcel Energy  
550 15th Street, Suite 1200  
Denver, Co 80202-4256

Re: Sulfur Content Certification of #1 and #2 Ultra Low Sulfur Diesel

Mr. Rozman;

This letter is to inform you that the letter dated January 1st, 2013 is now revoked, effective today for all sales to NSP/Xcel Energy.

Flint Hills Resources, LP agrees that all #2S15 and #1S15 Diesel Fuel that leaves the Pine Bend refinery via loading rack or pipeline destined for NSP/Xcel Energy shall meet the enclosed specifications.

In the event that a shipment of fuel goes out to NSP/Xcel Energy with a sulfur concentration of greater than 15 ppm, FHR will provide notification to Xcel Energy on the date of delivery that the diesel fuel exceeded such value. FHR will also continue to provide shipment notification until December 31, 2014.

If you have any additional concerns, please contact me at 888-999-6308.

Thank you,

Tom Garncarz

## #2 S15 Diesel

### Product Description

Except as permitted by law, for MN destinations this product will be rack blended with 5% Biodiesel complying with ASTM D6751

Product Property	Test Method	Minimum Specification	Maximum Specification	Notes
<b>Distillation</b>				
50% Recovered, °F	ASTM D88	Report		
90% Recovered, °F	ASTM D88	540	540	
<b>Combustion Properties</b>				
Flash PM, °F	ASTM D63	125 (MN) 100 (WI)		
Cetane Number	ASTM D613	40		
Cetane Index by ASTM D976	ASTM D976	40 (or 4= 35% Aromatics)		
Ash, % mass	ASTM D482		0.01	
<b>Fluidity</b>				
Viscosity, cS @104 °F	ASTM D445	1.9	4.1	
Pour Point, °F	ASTM D97 or D5949		0 (Dec-Mar), 10 (Apr-Nov)	
Cloud Point, °F	ASTM D2500 or D5773		14 (Dec-Mar), 20 (Apr-Nov)	
Lubricity @ 60°F, microns	ASTM D6079		520	
<b>Gravity &amp; Mixing</b>				
Gravity Average, °API	ASTM D1298 or D4052	Report		
<b>Composition</b>				
Sulfur, Total, ppmw (D 5453 primary method)	ASTM D6453 or D2622		15	
<b>Corrosion and Stability</b>				
Corrosion, Copper 3 hours @ 122°F	ASTM D130		3	
Filter Pad Rating (thermal oxidative stability)	ASTM D8488	70		
<b>Color and Contaminants</b>				
Color (ASTM)	ASTM D 1500		2.5	
Free Water Visual Inspection (Haze)	ASTM D4176		2	
Rambottom Carbon Residue on 10% Distillation Residue, %mass	ASTM D524		0.15	
Water & Sediment, % vol	ASTM D2709		0.05	
<b>Additives</b>				
Red Dye			See note	A

### Notes

- A. Product shall not be dyed at the tank. If product is not taxed for on road use, it must contain red dye to be injected at the tank. If so, the concentration of red dye must be Unisol Red B-50 at a level spectrally equivalent to 0.9 lbs. per thousand barrels of solid dye (Standard Solvent Red 26).



Flint Hills Resources  
Pine Bend Refinery

Product Specifications & Test Methods

# #1 315 Diesel

## Product Description

Except as permitted by law, for MM destinations this product will be rack blended with 5% Biodiesel complying with ASTM D875.

Product Property	Test Method	Minimum Specification	Maximum Specification	Notes
<b>Distillation</b>				
10% Recovered, °F	ASTM D86		418	
50% Recovered, °F	ASTM D86	Report		
50% Redistilled, °F	ASTM D86		550	
<b>Combustion Properties</b>				
Flash TCC, °F	ASTM D56	100		
Cetane Number	ASTM D613	40		
Cetane Index by ASTM D4737 (Proc A)	ASTM D4737 Proc A	40		
Cetane Index by ASTM D875	ASTM D976	40 (or <= 35% Aromatics)		
Ash, % mass	ASTM D402		0.01	
<b>Fluidity</b>				
Viscosity, cS @104 °F	ASTM D445	3.3	2.1	
Pour Point, °F	ASTM D97 or D5949		0	
Lubricity @ 60 F, microns	ASTM D6078		520	
<b>Gravity &amp; Mixing</b>				
Gravity Average °API	ASTM D1298 or D4052	35.0		
<b>Composition</b>				
Sulfur Total, ppmw (D 5453 primary method)	ASTM D5453 or D2622		15	
Sulfur Mercaptan, wt %	ASTM D3227		0.004	
<b>Corrosion and Stability</b>				
Corrosion, Copper 3 hours @ 122°F	ASTM D130		3	
<b>Color and Contaminants</b>				
Free Water Visual Inspection (Haze)	ASTM E4176		2	
Reabsorbent Carbon Residue on 10% Distillation Residue, %mass	ASTM D524		0.15	
Water & Sediment, % vol	ASTM D2709		0.05	
<b>Additives</b>				
Red Dye			See note	A

## Notes

A Product shall not be dyed at the tank. If product is not tanked for on road use, it must contain red dye to be injected at the rack. If so, the concentration of red dye must be Unisol Red B-50 at a level spectrally equivalent to 3.9 lbs. per thousand barrels of solid dye Standard Solvent Red 26.