

AIR EMISSION PERMIT NO. 08500034- 001

IS ISSUED TO

HUCHINSON UTILITIES COMMISSION

Hutchinson Utilities Commission, Plant 2
1100 Industrial Boulevard
Hutchinson, McLeod County, Minnesota 55350

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

Permit Type

Total Facility Operating Permit
Major Amendment

Application Date

June 24, 1998
November 10, 1999

This permit 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. Terms used in the permit are defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Acid Rain, Part 70 and Limits to Avoid Federal New Source Review

Issue Date: October 31, 2000

Expiration: October 31, 2005

All Title I Conditions do not expire.

Don Smith

Rodney E. Massey, P.E.
District Director

for

Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

DS:lk

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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 provisions of the applicable requirements identified in the permit as the basis of each condition.

Subject to the limitations 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.

Hutchinson Utilities Commission may be subject to additional requirements for major stationary sources under the Prevention of Significant Deterioration (PSD) major source requirements under 40 CFR Section 52.21 and the Minnesota State Implementation Plan. While the Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency (EPA) are evaluating the applicability of PSD permitting for the total facility, a permit shield is not available with respect to Hutchinson Utilities Commission's synthetic minor source status for nitrogen oxides (NO_x). If the MPCA and U.S. EPA determine that the source is not subject to any additional requirements, the permit can be reopened to provide a permit shield with respect to PSD at the facility.

FACILITY DESCRIPTION:

Hutchinson Utilities Commission (HUC) Plant No. 2 is an existing municipal electric generation utility located at 1100 Industrial Boulevard, Hutchinson, Minnesota. The primary responsibility of HUC is to provide electrical power to the city of Hutchinson. HUC purchases some of its power from other sources, and produces its own power when:

- 1) their contracted power supplier requests them to generate;
- 2) power is interrupted; or
- 3) economical power is not available through MidContinent Area Power Pool.

Emission units at the facility include a GE LM 6000 52 megawatt (MW) combined cycle combustion turbine restricted to combusting natural gas and a GE Frame 5 22 megawatt (MW) simple cycle combustion turbine restricted to combusting natural gas and very low sulfur content distillate oil (less than 0.05 percent sulfur), two distillate fuel oil storage tanks, and one steam boiler. HUC uses water injection to control Nitrogen Oxide (NOx) emissions from the two turbines.

Because the combined cycle combustion turbine uses a recovered heat steam boiler to power an additional generator, HUC is considered one of the 28 named source categories listed in 40 CFR § 52.21, making it's major source threshold for New Source Review 100 tons per year. The Permittee is considered a non-major source for New Source Review through federally enforceable synthetic minor limits of 99 tons per year NOx and Carbon Monoxide, along with the requirement to operate air pollution control equipment. This stationary source is located in an area which is designated attainment (or unclassifiable) for all criteria pollutants. Limitation of the remaining criteria pollutants is not required, since the potential emissions of these pollutants are under major source thresholds listed in 40 CFR § 52.21.

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

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
Permit Shield and Prevention of Significant Deterioration: Hutchinson Utilities Commission may be subject to additional requirements for major stationary sources under the Prevention of Significant Deterioration (PSD) major source requirements under 40 CFR Section 52.21 and the Minnesota State Implementation Plan. While the Minnesota Pollution Control Agency (MPCA) and the U.S. Environmental Protection Agency (EPA) are evaluating the applicability of PSD permitting for the total facility, a permit shield is not available with respect to Hutchinson Utilities Commission's synthetic minor source status for nitrogen oxides (NOx). If the MPCA and U.S. EPA determine that the source is not subject to any additional requirements, the permit can be reopened to provide a permit shield with respect to PSD at the facility.	hdr
Acid Rain Program: This source is subject to U.S. EPA's Acid Rain Program pursuant to the requirements in 40 CFR Parts 72, 73, 75, 77 and 78. Certain Acid Rain Program requirements are included in Tables A and/or B of this permit for the purpose tracking by the MPCA. All other Acid Rain Program requirements are referenced in the Phase II Permit Application attached to this permit as Appendix A.	40 CFR Section 72.6(a)(3)(i); 40 CFR Section 72.9; 40 CFR Section 72.30(b)(2)(ii)
A. EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 99 tons/year using 12-month Rolling Sum based on Equation 1. Equation 1: Lb of NOx per year = [(lb of NOx emitted by EU 001) + [(NOxEFng3 x 1000 ft3 gas used by EU 003) + [(NOxEFng4 x 1000 ft3 gas used by EU 004) + [(NOxEFfo4 x gallons of No. 2 distillate fuel oil used by EU 004)] Where, 'lb of NOx emitted by EU 001' = amount as measured by EU 001's NOx CEMS NOxEFng3 = NOx emission factor burning natural gas in EU 003 NOxEFng4 = NOx emission factor burning natural gas in EU 004 NOxEFfo4 = NOx emission factor burning No. 2 fuel oil in EU 004 and all factors are measured by a NOx CEMS, in Appendix B, or are those most recently approved by U.S. EPA.	Title I Condition: NOx emission limit taken to avoid major source classification under 40 CFR Section 52.21.
Carbon Monoxide: less than or equal to 99 tons/year using 12-month Rolling Sum based on Equation 2. Equation 2: Lb of CO per year = [(COEFng1 x 1000 ft3 gas used by EU 001) + [(COEFng3 x 1000 ft3 gas used by EU 003) + [(COEFng4 x 1000 ft3 gas used by EU 004) + [(COEFfo4 x gallons of No. 2 distillate fuel oil used by EU 004)] Where, COEFng1 = CO emission factor burning natural gas in EU 001 COEFng3 = CO emission factor burning natural gas in EU 003 COEFng4 = CO emission factor burning natural gas in EU 004 COEFfo4 = CO emission factor burning No. 2 fuel oil in EU 004 and all factors are in Appendix B or are those most recently approved by U.S. EPA.	Title I Condition: CO emission limit taken to avoid major source classification under 40 CFR Section 52.21.
B. OPERATIONAL REQUIREMENTS	hdr
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
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 Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
C. NOTIFICATION REQUIREMENTS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
D. PERFORMANCE TESTING REQUIREMENTS	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
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Operations during periods of start-up, shutdown and malfunction shall not constitute representative conditions for the purpose of a performance test. Emissions in excess of the level of the applicable emission limit during periods of start-up, shutdown and malfunction shall not be considered a violation of the applicable emission limits set by Minnesota Rules (Minn. R. ch. 7011), or federal New Source Performance Standards (40 CFR pt. 60).	40 CFR Section 60.8(c); Minn. R. 7017.2025, subp. 1
E. MONITORING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

<p>Calculations shall be performed using emission factors from the latest version of AP-42 or DRAFT AP-42 for Stationary Gas Turbines, unless specific emission factors for the turbines are developed through performance testing.</p> <p>If performance testing data is used to develop emission factors for NOx or CO, submit:</p> <p>a test notification, at least 30 days prior to the performance test; a test plan, at least 30 days prior to the performance test; a test report, within 45 days following the performance test; a microfiche copy of the test report, within 105 days following the performance test.</p>	<p>Title I Condition: Monitoring to demonstrate compliance with NOx and CO limits taken to avoid major source classification under 40 CFR Sections 52.21 and 70; Minn. R. 7007.0800, subp. 4</p>
<p>Emission Factors Obtained From Performance Testing:</p> <p>Emission Factors LOWER Than Predicted by AP-42: The factor developed from the testing may be used upon receipt of written approval of the test results from the MPCA, and may be used for one year following that approval.</p> <p>Emission Factors HIGHER Than Predicted by AP-42: Should stack performance testing yield an emission factor higher than those contained in the most recent version of AP-42, the higher factor developed from the testing shall be used until a new performance test yields a lower factor.</p>	<p>Title I Condition: Monitoring to demonstrate compliance with NOx and CO limits taken to avoid major source classification under 40 CFR Sections 52.21 and 70; Minn. R. 7007.0800, subp. 4</p>
<p>Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 4(D)</p>
<p>F. RECORDKEEPING REQUIREMENTS</p>	<p>hdr</p>
<p>Recordkeeping for NOx and CO Emission Limits: Maintain records on site of type and amount of fuel burned in all emission units at the facility. Daily usage of natural gas and distillate fuel oil shall be determined with fuel meters and recorded each day that fuel is combusted for use in Equations 1 and 2. □</p>	<p>Title I Condition: Recordkeeping for limit to avoid major source classification under 40 CFR Section 52.21.</p>
<p>Record keeping: 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.</p>	<p>Minn. R. 7007. 0800, subp. 5(B)</p>
<p>Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>G. REPORTING REQUIREMENTS</p>	<p>hdr</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 through Minn. R. 7007.1500</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).</p>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>Emission Fees: due 60 days after receipt of an MPCA bill.</p>	<p>Minn. R. 7002.0005 through Minn. R. 7002.0095</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: GP 001 Distillate Fuel Oil Storage Tanks Subject to 40 CFR pt. 60, subp. Kb**Associated Items:** TK 001 No. 2 Diesel Fuel Oil

TK 002 No. 2 Diesel Fuel Oil

What to do	Why to do it
Keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.	40 CFR Section 60.116b(b)

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: EU 001 Main turbine, single and combined cycles**Associated Items:** CE 001 Steam or Water Injection

SV 001

SV 002

What to do	Why to do it
A. EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 0.0114 percent by volume (114 ppmv) at 15 percent oxygen on a dry basis during simple cycle operation. This limit applies at SV 001 after start-up and during normal operating conditions.	40 CFR Section 60.332(a)(1); Minn. R. 7011.2350
Nitrogen Oxides: less than or equal to 0.0141 percent by volume (141 ppmv) at 15 percent oxygen on a dry basis during combined cycle operation. This limit applies at SV 002 after start-up and during normal operating conditions.	40 CFR Section 60.332(a)(1); Minn. R. 7011.2350
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained. This limit applies to both SV 001 and SV 002.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input .	Minn. R. 7011.2300, subp. 2
B. OPERATIONAL REQUIREMENTS	hdr
Fuel Use: EU001 restricted to combusting pipeline quality natural gas with a maximum sulfur content of 0.05 percent by weight.	Minn. R. 7007.0800, subp. 2 to meet requirements of Minn. R. 7011.2300, subp. 2 and to demonstrate compliance with 40 CFR Section 60.333(b) (NSPS Fuel Sulfur Content Limit)
C. TITLE IV (Acid Rain Program) MONITORING REQUIREMENTS	hdr
Measure or calculate NOx, SO2 and CO2 emission rates for EU 001 in accordance with 40 CFR Section 75.	40 CFR Section 75.10, and to meet the compliance demonstration requirements of 40 CFR Section 60.334
Emissions Monitoring: The owner or operator shall use an in-stack CEMS to measure NOx emissions and flow rate for EU 001 in accordance with 40 CFR Appendix B.	40 CFR Section 75.10, and to meet the requirements of a Title I Condition: Monitoring of emissions to demonstrate compliance with facility-wide NOx emission limit; Minn. R. 7007.0800, subp. 4
D. CONTINUOUS EMISSION MONITOR SYSTEM (CEMS) REQUIREMENTS (Acid Rain Program)	hdr
CEMS Certification Test: due in accordance with 40 CFR Section 75.4. Certify all CEMS required by the Acid Rain Program in accordance with 40 CFR 75, Appendix A.	40 CFR Section 75.4(b)
CEMS Certification Test Monitoring Plan: due 45 days before CEMS Certification Test. This is the monitoring plan required by 40 CFR pt. 75.	40 CFR Section 75.62; 40 CFR Section 75.20; Minn. R. 7017.1060, subp. 1 & 2
CEMS Certification Test Pretest Meeting: due 7 days before CEMS Certification Test.	Minn. R. 7017.1060, subp. 3□
CEMS Certification Test Report: due 30 days after CEMS Certification Test.	40 CFR Section 75.63; Minn. R. 7017.1080, subp. 1, 2, & 4
CEMS Certification Test Report - Microfiche Copy: due 105 days after CEMS Certification Test.	Minn. R. 7017.1080, subp. 3
Daily Calibration Error (CE) Test: conduct daily CE testing on all CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B.	40 CFR pt. 75, Appendix B, Section 2.1
Linearity and Leak Check Test (Acid Rain Program): due before end of each calendar quarter following CEM Certification Test Linearity and Leak Check Test (Acid Rain Program): due before end of each calendar quarter following CEMS Certification Test. Conduct a quarterly linearity test on CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B.	40 CFR pt. 75, Appendix B, Section 2.2□
Linearity Test Results Summary: due 30 days after end of each calendar quarter following Linearity and Leak Check Test if performed.	Minn. R. 7017.1180, subp. 4□
CEMS Relative Accuracy Test Audit (RATA): due before end of each year following CEM Certification Test. Conduct a RATA on all CEMS required by the Acid Rain Program, in accordance with 40 CFR pt. 75, Appendix B. If the RATA results indicate a relative accuracy of 7.5% or less, the next RATA is not required for twelve months.	40 CFR pt. 75, Appendix B, Section 2.3
Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA).	Minn. R. 7017.1180, subp. 2
Relative Accuracy Test Audit (RATA) Results Summary: due 30 days after end of each calendar half-year in which the CEMS RATA was conducted.	Minn. R. 7017.1180, subp. 3
CEMS QA/QC: The owner or operator of an affected facility shall operate, calibrate, and maintain each CEMS according to the QA/QC procedure in 40 CFR pt. 75, Appendix B as amended.	40 CFR Section 75.21

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Recordkeeping: The owner or operator must retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement, or report. Records shall be kept at the source.	Minn. R. 7017.1130; 40 CFR Section 75.50
Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed, except in emergencies where failure to bypass would endanger human health, safety, or plant equipment. "Acceptable Monitor Downtime" is defined under Minn. R. 7017.1090, subp. 2.	Minn. R. 7017.1090, subp. 1
E. RECORDKEEPING REQUIREMENTS	hdr
Record the type of fuel used on a monthly basis.	Minn. R. 7007.0800, subp. 5
Maintain records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment, or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7
Maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance test measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required, recorded in a permanent form suitable for inspection. The file shall be retained for a minimum of two years following the date of such measurements, maintenance, reports and records.	40 CFR Section 60.7
Recordkeeping - CEMS Data: Retain records of all CEMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records are to be kept at the source.	40 CFR Section 75.50; Minn. R. 7007.0800, subp. 5
F. REPORTING REQUIREMENTS	hdr
Excess Emissions and Monitoring System Performance Reports shall include, at a minimum, the information required by 40 CFR Sections 60.7(c) and 60.7(d), and any period where the fuel sulfur content is greater than or equal to 0.05 percent by weight. DRF-1 and DRF-2 forms provided by the MPCA may be used to meet this requirement.	40 CFR Section 60.7; Minn. R. 7007.0800, subp. 2
Certify Acid Rain Program Submittals: Each submission under the Acid Rain Program shall be submitted, signed, and certified by the designated representative for all sources on behalf of which the submission is made in accordance with 40 CFR Section 72.21.	40 CFR Section 72.21
See Table B of this permit for additional submittal and reporting requirements.	hdr
G. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Test: due 60 days after Permit Issuance, to measure EU 001's Carbon Monoxide (CO) emissions. The CO performance test shall be conducted to verify the emission factor used in determining compliance with the facility-wide synthetic minor CO limit.	Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. PT Notifications (written): 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report - Microfiche: due 105 days after each Performance Test	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: EU 003 Combustion Air Preheat Boiler**Associated Items:** SV 003

What to do	Why to do it
A. EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1; Minn. R. 7011.0550
Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity. An exceedance of this opacity standard occurs whenever any one-hour period contains two or more six-minute periods during which the average opacity exceeds 20 percent or whenever any one-hour period contains one or more six-minute periods during which the average opacity exceeds 60 percent.	Minn. R. 7011.0515, subp. 2
B. OPERATIONAL REQUIREMENTS	hdr
Fuel Use: EU003 is restricted to combusting only pipeline quality natural gas.	Minn. R. 7007.0800, subp. 2
C. MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: The Permittee shall record the type of fuel used on a monthly basis to demonstrate compliance with Fuel Use Restriction in hdr B above.	Minn. R. 7007.0800, subp. 5
Natural Gas Combustion Recordkeeping: By the 15th of each month, the Permittee shall: 1. determine and record the amount of natural gas combusted in EU 003 the previous day; 2. calculate and record the amount of natural gas combusted in EU 003 during the previous 12-month period (12-month Rolling Sum). Maintain all records for a minimum of 5 years from the date of calculation.	Title I Condition: Recordkeeping for limit to avoid major source and modification classification under 40 CFR Section 52.21

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: EU 004 Peaking turbine**Associated Items:** CE 002 Steam or Water Injection

SV 004

What to do	Why to do it
A. EMISSION LIMITS	hdr
Nitrogen Oxides: less than or equal to 0.0075 percent by volume (75 ppmv) at 15 percent oxygen and on a dry basis when combusting natural gas. This limit applies at SV 003 after start-up and during normal operating conditions.	40 CFR Section 60.332(b)
Nitrogen Oxides: less than or equal to 0.0075 percent by volume (75 ppmv) at 15 percent oxygen and on a dry basis when combusting No. 2 distillate fuel oil. This limit applies at SV 003 after start-up and during normal operating conditions.	40 CFR Section 60.332(b)
Sulfur Dioxide: less than or equal to 0.50 lbs/million Btu heat input .	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained. This limit applies at SV 003.	Minn. R. 7011.2300, subp. 1
B. OPERATIONAL REQUIREMENTS	hdr
Sulfur Content of Fuel: less than or equal to 0.05 percent by weight .	40 CFR Section 72.7; and to meet 40 CFR Section 60.333(b)
Fuel Use: EU 004 restricted to combusting pipeline quality natural gas and No. 2 distillate fuel oil with a maximum fuel sulfur content of 0.05 percent by weight.	Minn. R. 7007.0800, subp. 2
C. MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Natural Gas Combustion Recordkeeping: By the 15th of each month, the Permittee shall: 1. determine and record the amount of natural gas combusted in EU 004 the previous day; 2. calculate and record the amount of natural gas combusted in EU 004 during the previous 12-month period (12-month Rolling Sum). Maintain all records for a minimum of 5 years from the date of calculation.	Title I Condition: Recordkeeping for limit to avoid major source and modification classification under 40 CFR Sections 52.21 and 70
No. 2 Distillate Fuel Oil Combustion Recordkeeping: By the 15th of each month, the Permittee shall: 1. determine and record the amount of No. 2 distillate fuel oil combusted in EU 004 the previous day; 2. calculate and record the amount of No. 2 distillate fuel oil combusted in EU 004 during the previous 12-month period (12-month Rolling Sum). Maintain all records for a minimum of 5 years from the date of calculation.	Title I Condition: Recordkeeping for limit to avoid major source and modification classification under 40 CFR Sections 52.21 and 70
Distillate Fuel Oil Nitrogen and Sulfur Content Monitoring: Analysis of distillate fuel oil nitrogen and sulfur content shall be determined using one of the approved ASTM reference methods for the measurement of sulfur and nitrogen in liquid fuels, or an approved alternative method, on each occasion the fuel is transferred to the storage tank from any other source.	40 CFR 60.334(b)(1)
Natural Gas Sulfur Content Monitoring: Analysis of natural gas sulfur content shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method, in accordance with the following schedule: Sulfur monitoring shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR Section 60.333(b), then sulfur monitoring shall be conducted once per quarter for six quarters. If after the first two years of sulfur monitoring, the fuel sulfur content shows little variability, and when calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified in 40 CFR Section 60.333(b) then sulfur monitoring shall be conducted twice per year, during the first and third quarters of each calendar year.	40 CFR 60.334(b)(2) and Minn. R. 7011.2350
Fuel Sulfur and Nitrogen Content Recordkeeping: Records of sample analysis pertinent to the custom fuel-monitoring schedule shall kept in accordance with the custom fuel-monitoring schedule for a period of five years.	40 CFR Section 60.334(b)(2); Minn. R. 7011.2350
D. PERFORMANCE TESTING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Initial Performance Test: due 180 days after Startup, but not to exceed 60 days after achieving the maximum production rate at which the affected facility will be operated to measure EU 004's Nitrogen Oxides (NOx) and Carbon Monoxide (CO) emissions. The NOx performance test shall be conducted to meet the requirements of 40 CFR Subp. GG. Also, the performance tests shall be conducted to verify the emission factors used in determining compliance with the facility-wide synthetic minor NOx and CO limits.	40 CFR Section 60.8(a); Minn. R. 7017.2020, subp. 1 and Minn. R. 7017.2030, subp. 4
General Performance Test (PT) Requirements: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. PT Notifications (written): 30 days before each Performance Test PT Plan: due 30 days before each Performance Test PT Pre-test Meeting: due 7 days before each Performance Test PT Report: due 45 days after each Performance Test PT Report - Microfiche: due 105 days after each Performance Test	40 CFR Section 60.8(a); Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
E. REPORTING REQUIREMENTS	hdr
Excess Emissions: Report to the Administrator any one hour period during which the average water-to fuel ratio falls below that required to demonstrate compliance with the NOx emission limit.	40 CFR Section 60.334(c); Minn. R. 7007.0800; Minn. R. 7011.2350
Water Injection System Deactivation: Report to the Administrator each period where the water injection system is deactivated due to ice fog conditions. The report shall include the date and time the system is deactivated and reactivated, along with the ambient weather conditions.	Minn. R. 7017.1000
Excess Emissions and Monitoring System Performance Reports shall include, at a minimum, the information required by 40 CFR Sections 60.7(c) and 60.7(d), and any period where the fuel sulfur content is greater than or equal to 0.05 percent by weight. DRF-1 and DRF-2 forms provided by the MPCA may be used to meet this requirement.	40 CFR Sections 60.7 and 72.7; Minn. R. 7007.0800, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: CE 001 Steam or Water Injection**Associated Items:** EU 001 Main turbine, single and combined cycles

What to do	Why to do it
Operate CE001 at all times EU001 is operating, except during startup or shutdown.	Minn. R. 7007.0800, subp. 2 to meet the NOx limit set in 40 CFR Section 60.332

TABLE A: LIMITS AND OTHER REQUIREMENTS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

Subject Item: CE 002 Steam or Water Injection**Associated Items:** EU 004 Peaking turbine

What to do	Why to do it
Install and operate continuous monitoring system to monitor and record the ratio of water and fuel consumption, accurate within +/- 5%.	40 CFR Section 60.334(a); Minn. R. 7011.2350
Water Injection Ratio: During the operation of EU 004, the water-to-fuel injection ratio shall be such that the NOx limit specified by 40 CFR Section 60.332(b) is not exceeded.	Minn. R. 7007.0800, subp. 2 to meet the limit set in 40 CFR Section 60.332 and to limit total facility NOx emissions to less than major source level in 40 CFR pt. 52.21
Operate CE 002 at all times EU 004 is operating, except during startup or shutdown.	Minn. R. 7007.0800, subp. 2 to meet the NOx limit set in 40 CFR Section 60.332

TABLE B: SUBMITTALS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2
Permit Number: 08500034 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for EU 004's Nitrogen Oxides (NOx) and Carbon Monoxide (CO) emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA.	EU004
Testing Frequency Plan	due 60 days after Performance Test for EU001's Carbon Monoxide (CO) emissions. The plan shall specify a testing frequency using the test data and MPCA guidance. Future performance tests based on year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required on written approval of MPCA.	EU001

TABLE B: RECURRENT SUBMITTALS

10/31/00

Facility Name: Hutchinson Utilities Commission -Plant 2

Permit Number: 08500034 - 001

What to send	When to send	Portion of Facility Affected
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Permit Issuance (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	EU001
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.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, to the Commissioner. This report covers all deviations experienced during the calendar year. The report shall not be sent to EPA.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

APPENDIX A: Phase II Permit Application

11/1/00

Facility Name: Hutchinson Utilities Commission - Plant 2
Permit Number: 08500034-001

Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31

This submission is ☒ New ☐ Revised

Plant Name	State	ORIS Code
Hutchinson Utilities Commission Plant No. 2	Minnesota	6358

Compliance Plan

a Boiler ID#	b Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	c Repowering Plan	d New Units Commence Operation Date	e New Units Monitor Certification Deadline
LM 6000 Combustion Turbine	Yes	No	11/3/94	2/3/95
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

Standard Requirements

Permit Requirements.

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

Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected

APPENDIX A: Phase II Permit Application

11/1/00

Facility Name: Hutchinson Utilities Commission - Plant 2
Permit Number: 08500034-001

unit at the source shall comply with the monitoring requirements as provided in 40 CFR parts 74, 75, and 76.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR parts 74 and 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements.

(1) The owners and operators of each source and each affected unit at the source shall:

- (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
- (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:

- (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
- (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

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

Excess Emissions Requirements.

(1) The designated representative of an affected unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.

(2) The owners and operators of an affected unit that has excess emissions in any calendar year shall:

- (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
- (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements.

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

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

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

Liability.

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c)

APPENDIX A: Phase II Permit Application

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Facility Name: Hutchinson Utilities Commission - Plant 2
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of the Act.

(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.

(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.

(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.

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

(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_x averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one affected unit shall not be liable for any violation by any other affected unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.

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

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

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

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

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

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

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

TECHNICAL SUPPORT DOCUMENT
for
AIR EMISSION PERMIT NO. 08500034-001

This Technical Support Document (TSD) is for all the interested parties of the permit. The purpose of this document is to set forth the legal and factual basis for the permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number (list both if different)	Facility Address (SIC Code: 4911)
Hutchinson Utilities Commission 225 Michigan Street Hutchinson, Minnesota 55350 (320) 587-4745	Hutchinson Utilities Commission 1100 Industrial Boulevard Hutchinson, Minnesota 55350

1.2. Description of the facility

Hutchinson Utilities Commission (HUC) Plant No. 2 is an existing municipal electric generation utility located at 1100 Industrial Boulevard, Hutchinson, Minnesota. The primary responsibility of HUC is to provide electrical power to the City of Hutchinson. HUC purchases some of its power from other sources, and produces its own power when:

- 1) their contracted power supplier requests them to generate;
- 2) power is interrupted; or
- 3) economical power is not available through MidContinent Area Power Pool.

Emission units at the facility include a GE LM 6000 52-megawatt (MW) combined cycle combustion turbine restricted to combusting natural gas and a GE Frame 5 22-megawatt (MW) simple cycle combustion turbine restricted to combusting natural gas and very low sulfur content distillate oil (less than 0.05 percent sulfur), two distillate fuel oil storage tanks, and one steam boiler. HUC uses water injection to control NO_x emissions from the two turbines.

Because the combined cycle combustion turbine uses a recovered heat steam boiler to power an additional generator, HUC is considered one of the 28 named source categories listed in 40 CFR § 52.21, making its major source threshold for New Source Review 100 tons per year. The Permittee is considered a non-major source for New Source Review through federally enforceable synthetic minor limits of 99 tons per year NO_x and CO, along with the requirement to operate air pollution control equipment. This stationary source is located in an area which is designated attainment (or unclassifiable) for all criteria pollutants. Limitation of the remaining criteria pollutants is not required, since the potential emissions of these pollutants are under major source thresholds listed in 40 CFR § 52.21.

1.3 Description of any changes allowed with this permit issuance

No changes to the facility are authorized by the issuance of this total facility permit.

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

Permit Number and Issuance Date	Action Authorized
08500034-003 March 16, 2000	Major Amendment: Replaced Curtiss-Wright 22-MW simple cycle combustion turbine (EU 002) with General Electric 22-MW simple cycle combustion turbine (EU 004).

1.5. Facility Emissions:

Tables 1 and 2 summarize the source's emissions. Table 3 summarizes the applicability of federal air quality programs.

Table 1. Limited Potential Emissions of Each Emission Unit:

EU No.:	SV No.:	Emission Unit Description	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Lead tpy	Single HAP tpy	All HAPs tpy
EU 001	001, 002	LM 6000 Turbine	37.71	37.71	0.54	*	*	21.60	Neg.	Below thresholds	Below threshold
EU 003	004	Boiler	0.33	0.33	0.03	4.29	3.61	0.24	Neg.		
EU 004	003	Frame 5 Turbine	9.43	9.43	7.16	*	*	5.40	Neg.	Below thresholds	Below threshold
GP 001	NA	Storage Tanks						0.12	Neg.		

Table 2. Total Facility Limited Potential and Actual Emissions:

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Lead tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions *	47.47	47.47	7.73	99.00*	99.00*	27.36	neg.	Below thresholds	Below thresholds
Total Facility Actual Emissions	28.99	28.99	0.67	64.64	75.60	16.60	neg.	Below thresholds	Below thresholds

Where,

PM = Particulate Matter
SO₂ = Sulfur Dioxide
CO = Carbon Monoxide

PM₁₀ = PM smaller than 10 microns
NO_x = Nitrogen Oxides
VOCs = Volatile Organic Compounds
HAPs = Hazardous Air Pollutants

* - The stationary source is non-major for New Source Review and Part 70 due to facility-wide NO_x and CO limits of 99 tons/year.

Table 3. Total Facility Classification

Classification	Major/Affected Source	Synthetic Minor *	Minor *
Prevention of Significant Deterioration	NA	NO _x and CO	PM, PM ₁₀ , SO ₂ and Lead
Non-Attainment Area Review	NA	NA	NA
Part 70 Permit Program (list pollutant)	NA	NO _x , CO and HAPs	PM, PM ₁₀ , SO ₂ , and Lead
Section 112(g) of the Clean Air Act	NA	NA	HAPs

* Refers to potential emissions that are less than those specified as major by 40 CFR § 52.21, 40 CFR pt. 51, Appendix S, and 40 CFR pt. 70.

2. Summary Regulatory and/or Statutory Basis of the Emission or Operational Limits

Table 4. Regulatory Overview of Facility

EU, GRP, or SV No. :	Applicable Regulations	Comments:
Total Facility	40 CFR §§ 52.21 and 70	New Source Review (Prevention of Significant Deterioration): Limit set for NO _x and CO to avoid major source classification under 40 CFR §§ 52.21 and 70.
EU 001 and EU 004	40 CFR pt. 60, subp. GG	Federal Standards of Performance for Stationary Gas Turbines: Limits nitrogen oxides and sulfur dioxide.
EU 001	40 CFR §§ 72.6(a)(3)(1) and 72.9	Title IV of the Clean Air Act, Acid Rain Program Requirements.
EU 003	40 CFR pt. 60, subp. Dc	Federal Standards of Performance for Small Boilers: No limits apply because unit combusts only natural gas.
GP 001	40 CFR pt. 60, subp. Kb	Federal Standards of Performance for Petroleum Storage Tanks: Requirement to keep records of tank dimensions.
EU 001 and EU 004	Minn. R. 7011.2300, subp. 2	State Standards of Performance for Internal Combustion Engines: Limits opacity and sulfur dioxide.
EU 001 and EU 004	Minn. R. 7017.2020 to 7017.2060	Performance Test Requirements: Demonstration of compliance with facility-wide NSR synthetic-minor limits.

3. Technical Information

3.1 Emission Factors

Emissions from the facility are calculated using a NO_x CEMS, and emission factors for natural gas and distillate fuel oil taken from AP-42, Table 3.1-1, “Emission Factors for NO_x and CO from Stationary Gas Turbines Controlled with Water Injection”, Page 3.1-10, April 2000, and Table 1.4-1 “Emission Factors for Nitrogen Oxides from Natural Gas Combustion in Small Boilers”, Page 1.4-5, July 1998. Emission calculations have been included as Attachment 2.

For emission factors *lower* than predicted by AP-42, the factor developed from the testing may be used upon receipt of written approval of the test results from the MPCA, and may be used for one year following that approval. Should stack performance testing yield an emission factor *higher* than those contained in the most recent version of AP-42, the higher factor developed from the testing shall be used until a new performance test yields a lower factor.

3.2 Applicability of Acid Rain Program (Title IV of the Clean Air Act)

3.2.a. EU 001, Combined Cycle 52-MW Combustion Turbine

3.2.a.1. SO₂ Emissions Monitoring

The Permittee is proposing to use the procedures in 40 CFR pt. 75, Appendix D to measure SO₂ emissions. Appendix D, Part 2.3.2 allows use of a default SO₂ emission rate of 0.0006 lb/mm Btu for calculating SO₂ emissions if the fuel combusted is pipeline quality natural gas.

3.2.a.2. NO_x Emissions Monitoring

The Permittee proposes to install a continuous emissions monitoring system (CEMS) to measure NO_x emissions on a continuous basis in accordance with 40 CFR § 75.10(a)(2). The system consists of NO_x pollutant concentration and CO₂ diluent gas monitors, with calculations performed by an automated Data Acquisition and Handling System (DAHS). A performance test will be conducted to calibrate the NO_x CEMS and to verify an emission factor used to calculate emissions from the facility to demonstrate compliance with a source-wide NO_x limit of 99 tons/year.

3.2.a.3. CO₂ Emissions Monitoring

As noted above, the Permittee proposes to install CO₂ concentration and flow monitors, along with the DAHS to measure CO₂ emissions.

3.2.a.4. Opacity Monitoring

As EU 001 burns pipeline quality natural gas, it is exempt from the opacity monitoring requirements under 40 CFR § 75.14(c).

3.2.a.5. *Bypass Stack*

EU 001 has both a primary stack (SV 001) and a bypass stack (SV 002). An exhaust gas diverter directs flow into either the bypass stack or through the combined cycle's heat recovery boiler and out the primary stack. During start-up all exhaust flow is directed to the bypass stack. When the turbine operation becomes stable, usually within minutes of start-up, the diverter directs a portion of the exhaust gas through the boiler and out the primary stack. When the boiler reaches operating temperature, typically within three hours of start-up, the diverter directs all exhaust gas through the boiler and out the primary stack. During the three-hour boiler warm up period, the turbine can only be operated at ten percent of its rated capacity due to exhaust turbulence associated with the partially open diverter.

The Permittee proposes to install the flow monitor, CO₂ diluent monitor, and continuous NO_x monitor on only the primary stack. A position switch will be installed to monitor the diverter. For all hourly periods when the diverter is directing a portion of the exhaust gases through the bypass stack, the monitors will record and report maximum potential flow and maximum potential emission data for SO₂, NO_x, CO₂ and heat input.

3.2.a.6. *Heat Input*

The Permittee proposes to use the procedure outlined in 40 CFR pt. 75, Appendix F to meet the heat input measurement requirement in 40 CFR § 75.10(c). Hourly exhaust gas concentration and a carbon-based F-factor for natural gas (see Appendix F, Part 3.3.5., Table 1) will be used to determine hourly heat input as specified in Appendix F, Part 5.3.1., Equation F-15.

3.2.b. EU 004, Simple Cycle 22-MW Combustion Turbine

40 CFR § 72.7 allows new utility units with a total nameplate electricity generating capacity of 25 MW or less burning only fuels with sulfur content of 0.05 percent or less by weight to be exempted from the Acid Rain Program.

The facility applied to the Director of the U.S. Environmental Protection Agency's (EPA) Acid Rain Division for an exemption from the program in late 1999. The facility has since received confirmation from U.S. EPA Headquarters (Robert Miller at (202) 564-9077) that simple cycle 22-MW turbine is not subject to the Acid Rain Program.

3.3 40 CFR pt. 60, subp. GG (NSPS for Stationary Gas Turbines)

The turbines are subject to 40 CFR pt. 60, subp. GG. The NSPS requires a NO_x emission limit; an initial performance test for NO_x; and periodic monitoring of the fuel nitrogen and sulfur content.

3.3.a. NO_x Emission Limit

40 CFR § 60.332(b) sets NO_x emission limits of 114 ppmv for EU 001 during simple cycle operation, 141 ppmv for EU 001 during combined cycle operation, and 75 ppmv for EU 004 burning natural gas or distillate fuel oil (see Attachment 1). HUC plans to use water injection to control NO_x emissions from the turbines to meet the limits.

3.3.b. Initial Performance Test

40 CFR pt. 60 requires that a initial performance tests be done on new emission units for NO_x to determine compliance with their NSPS NO_x emission limits. An initial NO_x performance test was required for EU 004 within 180 days of initial start-up, but no later than 60 days after achieving maximum production rate. The performance test will also be used to verify the emission factors used in calculating the facility's potential emissions so that the total non-major source status will not be altered.

An initial NO_x performance test was done on EU 001 on November 3, 1994 where compliance with the 40 CFR pt. 60, subp. GG limit was demonstrated. A performance test will still be done on EU 001 to calibrate its NO_x CEMS in accordance with the Acid Rain Program.

3.3.c. Custom Fuel Monitoring Schedule

Under 40 CFR § 60.334, monitoring of the nitrogen and sulfur content of the fuel is required unless an alternative custom fuel monitoring schedule is applied for and granted by U.S. EPA. On February 15, 2000, MPCA staff sent a request to U.S. EPA Region V to approve an alternative custom fuel monitoring schedule in accordance with the provisions in 40 CFR § 60.334. Approval of the fuel monitoring schedule by the Regional Air Enforcement and Compliance Assurance Branch was received by MPCA staff in a letter dated March 24, 2000 (see Attachment 3).

3.3.c.1. EU 001, Combined Cycle 52-MW Combustion Turbine

Since the Permittee will be conducting SO₂ and NO_x monitoring in accordance with the Acid Rain Program (see Section 3.2.a. above), monitoring of the sulfur and nitrogen contents of the natural gas was not required (see Attachment 3).

3.3.c.2. EU 004, Simple Cycle 22-MW Combustion Turbine

3.3.c.2.a. Natural Gas Combustion

The Permittee will only monitor the sulfur content of the natural gas, and is not required to monitor the nitrogen content of the natural gas or distillate fuel oil.

The decision not to require monitoring the nitrogen content of the natural gas is based on a memorandum from U.S. Environmental Protection Agency (U.S. EPA) Headquarters dated August 14, 1997 regarding custom fuel monitoring schedules under 40 CFR pt. 60, subp. GG (see Attachment 4). The memorandum states that “. . . nitrogen monitoring can be waived for pipeline quality natural gas, since there is no fuel-bound nitrogen and since the free nitrogen does contribute appreciably to NO_x emissions.”

The alternate custom schedule allows HUC to monitor the sulfur content using an approved ASTM reference method for the measurement of sulfur in gaseous fuels beginning bi-monthly, followed by quarterly, and then semi-annually, given at least six months of data demonstrating little variability in sulfur content at each monitoring frequency.

3.3.c.2.b. Distillate Oil Combustion

Because distillate oil is supplied to the turbine from a bulk storage tank (TK 001 or 002), the schedule requires that both the nitrogen and sulfur contents of the oil be determined by HUC on each occasion the fuel is transferred to the tanks from any other source (40 CFR § 60.334(b)(1)).

3.4 Compliance Demonstration Requirements for Minn. R. 7011.2300 (State Standards of Performance for Internal Combustion Engines)

3.4.a. EUs 001 and 004, Stationary Gas Turbines

Minn. R. 7011.2300 sets limits on opacity and sulfur dioxide for the two turbines, EU 001 and 004.

MPCA staff's experience has been that natural gas and very low sulfur distillate fuel oil burned in internal combustion engines contributes negligibly to opacity.

Performance testing was not required for sulfur dioxide because it is extremely unlikely that the emission limit would be exceeded burning natural gas or low sulfur distillate fuel oil (less than 0.05 percent by weight). AP-42 predicts an emission factor of 0.05 lb/mm Btu of sulfur dioxide burning distillate oil, and 0.047 lb/mmBtu burning natural gas; while the emission limit is 0.5 lb/mm Btu.

3.4.b. EU 003, 10 mmBtu/hr Boiler

Minn. R. 7011.0515 sets limits on particulate matter and opacity and sulfur dioxide for the combustion air preheat boiler.

Again, MPCA staff's experience has been that natural gas burned in boilers contributes negligibly to opacity. Performance testing was not required for particulate matter because AP-42 predicts an emission factor of 7.6 lb/mmCF, or 0.00745 lb/mmBtu burning natural gas; while the emission limit is 0.4 lb/mm Btu.

3.5 Hazardous Air Pollutants from Natural Gas Combustion

Even though combustion turbines are very efficient combustion devices, products of incomplete combustion lead to the formation of some hazardous air pollutants (HAPs). The following HAPs have been measured above the emission test method detection limits from combustion turbines: acetaldehyde, acrolein, benzene, ethyl benzene, formaldehyde, naphthalene, PAH, toluene, and xylene. The concentrations of these HAPs are low with many concentrations being very close to the emission test methods detection limits (see Attachment 5).

Under Section 112(g) of the Clean Air Act of 1990 (CAA), the U.S. Environmental Protection Agency (EPA) is required to develop national emission standards for hazardous air pollutants (NESHAP) for source categories. The EPA has determined that combustion turbines may be major sources for emissions of one or more of the hazardous air pollutants (HAPs) listed in Section 112 of the CAA. The source category list schedule published by EPA requires that the NESHAP for this source category, Stationary Gas Turbines, be promulgated by November 15, 2000. To be considered a major source for HAPs under the Stationary Gas Turbines NESHAP, a facility would have to be capable of emitting 10 tons per year of a single HAP, or 25 tons per year of all combined HAPs. This facility is not a major source for HAPs. Although all three emission units burning natural gas at full capacity 8760 hours per year would emit 10.3 tons per year of formaldehyde, and 12.6 tons per year of combined HAPs, the Permittee has taken federally enforceable facility-wide synthetic minor limits which restrict emissions to less than 99 tons of NOx and CO year hours per year (see Attachment 6).

40 CFR 51.166(b)(4) defines “potential to emit” as:

“the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restriction on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation of the effect it would have on emissions is federally enforceable.”

MPCA staff believe that the limits taken to avoid classification as a major source under 40 CFR Sections 52.21 and 70, can be treated as an operational limitation that restricts the maximum capacity of the source to emit more than 10 tons of formaldehyde per year, or 25 tons of combined HAPs per year, under its physical and operational design. Therefore no synthetic minor limits for HAPs were placed in the permit.

3.6. Carbon Monoxide (CO) Performance Testing

A CO performance test was required for EU 001 within 60 days of Permit Issuance. An initial CO performance test was also required for EU 004 within 180 days of initial start-up, but no later than 60 days after achieving maximum production rate. The performance tests will be used to verify the emission factors used in calculating the facility’s potential emissions so that the total non-major source status will not be altered.

4. Conclusion

Based on the information provided by Hutchinson Utilities Commission, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 08500034-001 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

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- Attachments:
1. MPCA Staff NSPS NO_x Emission Limit Calculations
 2. Total Facility Emission Calculations
 3. U.S. EPA Alternate Custom Fuel Monitoring Approval Letter Dated March 23, 2000
 4. U.S. EPA Headquarters Custom Fuel Monitoring Schedules Memorandum Dated August 14, 1997 (40 CFR pt. 60, subp. GG)
 5. DRAFT AP-42 Sections Dated May 1998, "Emission Factors for Hazardous Air Pollutants from Natural Gas-Fired and Distillate Oil Fired Turbines"
 6. MPCA Staff HAPs Emission Calculations
 7. CD-01 Forms