

AIR EMISSION PERMIT NO. 01500010- 006
(Part 70 Reissuance)

IS ISSUED TO

NEW ULM PUBLIC UTILITIES-MUNICIPAL POWER

310 First Street North
New Ulm, Brown County, MN 56073

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

Application Type	Application Date
Total Facility Operating Permit - Reissuance	March 22, 2004
Supplemental Submittal	February 28, 2007
Supplemental Submittal	May 1, 2007
Supplemental Submittal	May 15, 2007

This permit supersedes all previous air permits 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. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Part 70/Major for NSR

Issue Date: September 4, 2007

Expiration: September 4, 2012
All Title I Conditions do not expire.

Richard J. Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
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:

This Facility is a municipal utility that provides electricity and steam. The Facility operates three boilers (EUs 001 and 002 are natural gas-fired and EU 003 is natural gas- and coal-fired) and two simple cycle distillate oil-fired combustion turbine generators (EU 004 and EU 005).

Total generating capacity is 76.2 megawatts. According to 40 CFR § 72.6(b)(1) and (2), none of the electric generating equipment is subject to Title IV because all units commenced operation before November 15, 1990.

Currently, very little coal is used by the Facility, and therefore coal storage, coal handling, and ash handling are insignificant activities as defined in Minn. R. 7007.1300. See Appendix B of this permit for all listed insignificant activities.

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

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
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150; Minn. R. 7009.0020
DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
These requirements apply where there is a reasonable possibility that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test described in Section 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project. Even though a particular modification is not subject to New Source Review, a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following information: 1. A description of the project 2. Identification of the emission unit(s) whose emissions of an NSR pollutant could be affected 3. The potential emissions of any existing or new emission units affected by the project. 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 unit(s) could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination. The Permittee shall maintain records of this documentation.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
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: a. The name and ID number of the facility, and the name and telephone number of the facility contact person 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. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Before beginning actual construction of any project which includes any electric utility steam generating unit (EUSGU), the Permittee shall submit a copy of the preconstruction documentation (items 1-4 under Preconstruction Documentation, above) to the Agency.	Title I Condition: 40 CFR Section 52.21(r)(6)(ii) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
For any project which does not include any EUSGU, the Permittee must submit a report to the Agency if the annual summed (actual, plus potential used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain: a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The annual emissions (actual plus potential, if any part of the project was analyzed using the hybrid test) for each pollutant for which the preconstruction projection and significant emissions rate is exceeded. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.	Title I Condition: 40 CFR Section 52.21(r)(6) and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 & 5
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080.
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
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)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	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
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
PERFORMANCE TESTING	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

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

<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 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</p> <p>The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.</p>	<p>Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2</p>
<p>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.</p>	<p>Minn. R. 7017.2025, subp. 3</p>
MONITORING REQUIREMENTS	hdr
<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>
RECORDKEEPING	hdr
<p>Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
REPORTING/SUBMITTALS	hdr
<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>

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

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
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Notification of actual annual emissions in excess of 100 tons of PM10, or 500 tons of SO2, or 1000 tons of NOX, during previous calendar year: Due 32 days after the first calendar year in which any of these thresholds is exceeded. This requirement then triggers the need to do modeling, as described in Table B of this permit.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7009.0020; Minn. R. 7007.0100; Minn. R. 7007.0800, subp. 2

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: GP 001 Boilers and Gas Turbine**Associated Items:** EU 001 Boiler #1

EU 002 Boiler #2

EU 003 Boiler #4

EU 004 Gas Turbine #5 (simple cycle)

EU 005 Gas Turbine #7 (simple cycle)

What to do	Why to do it
Operating Restriction: when EU004 and/or EU005 is combusting fuel oil, EU001, EU002, and EU003 are restricted to combusting natural gas only.	Minn. R. 7007.0800, subp. 2; Minn. R. 7009.0020
Recordkeeping - Fuel Type Usage: When EU004 is operating (and combusting distillate fuel oil), record the start and stop times for EU004 and the type of fuel combusted in EU003 during each EU004 operating period.	Minn. R. 7007.0800, subp. 5

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: EU 001 Boiler #1**Associated Items:** GP 001 Boilers and Gas Turbine

SV 001 Boiler 1 Stack

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input . Maximum PTE based on equipment capacity is approximately 0.0072 lbs/million Btu heat input.	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 0.05 lbs/million Btu heat input	Minn. R. 7007.0800, subp. 2; Minn. R. 7009.0020
Fuel Permitted: pipeline natural gas only.	Minn. R. 7007.0800, subp. 2
Recordkeeping: keep a record of the type of fuel combusted in EU 001. Records shall be entered no less frequently than semiannually.	Minn. R. 7007.0800, subp. 5

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: EU 002 Boiler #2**Associated Items:** CE 001 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

GP 001 Boilers and Gas Turbine

SV 002 Boiler 2 Stack

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input . Maximum PTE based on equipment capacity is approximately 0.0072 lbs/million Btu heat input.	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
Fuel Permitted: pipeline natural gas only.	Minn. R. 7007.0800, subp. 2
Recordkeeping: keep a record of the type of fuel combusted in EU002. Records shall be entered no less frequently than semiannually.	Minn. R. 7007.0800, subp. 5
CONTROL REQUIREMENTS	hdr
The operation of CE001 is not necessary in order for the process to meet applicable emissions limits. However, if the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory, the cyclone must comply with the requirements listed under Subject Item CE001 during the time credit for control is taken.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: EU 003 Boiler #4**Associated Items:** CE 002 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 003 ESP or Fabric Filter

GP 001 Boilers and Gas Turbine

MR 003 Opacity Monitor

SV 003 Boiler 3 Stack

What to do	Why to do it
EMISSION & OPERATING LIMITS	hdr
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Sulfur Dioxide: less than or equal to 4.0 lbs/million Btu heat input while burning coal.	Minn. R. 7011.0510, subp. 1
Determination of Applicable SO ₂ Limit When Cofiring Coal and Natural Gas: Use the following formula to determine the prorated SO ₂ emission limit when cofiring coal and natural gas: $w = z(4.0 \text{ lb/mmBtu})$ where: w = allowable prorated SO ₂ emission rate in lb/mmBtu z = percentage of total heat input from coal	Minn. R. 7011.0505, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
Fuels Permitted: pipeline natural gas; bituminous coal; on-site generated petroleum-derived used oil (as defined at Minn. R. 7045.0100, subp. 100a as oil which has been used and as a result has become contaminated by physical or chemical impurities); and on-site generated EDTA-type boiler cleaning agents. Use of these fuels is restricted as follows: 1) Coal may be combusted only after a fabric filter or electrostatic precipitator (indicated above in Associated Items as CE003) is installed and operational. 2) On-site generated petroleum-derived used oil is limited to no more than 5% of total heat input on an hourly basis, and a maximum of 6,000 gallons per calendar year. 3) On-site generated EDTA-type boiler cleaning agents are subject to the following conditions: a) EU 003 must be operating at or above 75% of rated capacity; b) cleaning agent feed rate shall not exceed 16 gpm; c) Flue gas oxygen shall not be less than 3% on an instantaneous basis.	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 15000 tons/year using 12-month Rolling Sum of Coal.	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING	hdr
Coal Monitoring and Recordkeeping: obtain a fuel certification from the coal supplier for each coal delivery stating the percent sulfur by weight and heat content of the coal. If the Permittee's coal supplier provides multiple coal deliveries from the same barge load, the Permittee may obtain a single certification for each barge load. However, the coal supplier must indicate on the certification that upon delivery, the supplier will notify the Permittee that coal from a different barge load is being delivered, and a new certification for that coal specifying the sulfur and heat contents of the coal will be furnished at the time of delivery.	Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping: By the 15th day of each month, calculate and record the quantity of coal combusted during the previous month, and for the previous 12 months (12-month rolling sum).	Title I Condition: To avoid classification as a major source under 40 CFR Section 70.2 and Minn. R. 7007.0200
SO ₂ Recordkeeping: Within 15 days after receipt of each coal certification, calculate and record the corresponding SO ₂ emission rate associated with combusting the coal included in that certification, in pounds of SO ₂ per million BTU of heat input to the boiler.	Minn. R. 7007.0800, subp. 4 and 5

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Emissions Monitoring: The owner or operator shall use a COMS to measure opacity emissions from EU003. See Subject Item MR003 for specific COMS operating requirements.	Minn. R. 7017.1006; 40 CFR Section 64.7(c); Minn. R. 7017.0200
CONTROL REQUIREMENTS (See also Subject Items CE002 and CE003)	hdr
When combusting coal, the Permittee shall operate and maintain CE002 such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 80 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14
When combusting coal, the Permittee shall have installed and shall operate and maintain CE003 such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 95 percent control efficiency	Minn. R. 7007.0800, subp. 2 and 14
TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Initial Startup of CE 003 (fabric filter or electrostatic precipitator) to measure PM emissions and opacity. (Initial Startup of CE003 is listed in Table B as a requirement for Subject Item CE003.)	Minn. R. 7017.2020, subp. 1
The Permittee shall operate and maintain CE002 at all times that any emission unit controlled by CE002 is in operation. The Permittee shall document periods of non-operation of the control equipment.	Minn. R. 7007.0800, subp. 2 and 14

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: EU 004 Gas Turbine #5 (simple cycle)**Associated Items:** GP 001 Boilers and Gas Turbine

SV 004 Gas Turbine 5 Stack

What to do	Why to do it
EMISSION AND OPERATIONAL LIMITS	hdr
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperature has been attained.	Minn. R. 7011.2300, subp. 1
MONITORING	hdr
Fuel Supplier Certification: the permittee shall obtain a certification from the distillate fuel oil supplier specifying the sulfur content in percent by weight, for each fuel oil delivery. Note that an SO ₂ emission rate of 0.5 lb/mmBtu occurs when distillate fuel oil with a sulfur content of 0.496% by weight is combusted in EU 004.	Minn. R. 7007.0800, subp. 4
TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 07/31/2006 to measure opacity emissions. The next test is due before 07/31/2011.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-11

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: EU 005 Gas Turbine #7 (simple cycle)**Associated Items:** GP 001 Boilers and Gas Turbine

SV 005 Gas Turbine 7 Stack

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
Nitrogen Oxides: less than or equal to 75 parts per million at 15 percent oxygen and on a dry basis. This does not apply when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; 40 CFR Section 60.332(b) and (f); Minn. R. 7011.2350
Sulfur Dioxide: less than or equal to 0.015 percent by volume at 15 percent oxygen and on a dry basis. OR Sulfur Content of Fuel: less than or equal to 0.8 percent by weight (8000 ppmw).	40 CFR Section 60.333; Minn. R. 7011.2350
Allowed Fuels: Distillate fuel oil only	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 1625648 gallons/year using 12-month Rolling Sum	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Sulfur Content of Fuel: less than or equal to 0.34 percent by weight	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Power Production: less than 28200 kilowatts using 8-hour Block Average	Minn. R. 7017.2025, subp. 3
No owner or operator shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard.	40 CFR Section 60.12
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: By the 15th day of each month, record the quantity of fuel combusted for the previous month, and the total quantity of fuel combusted for the previous 12 months (12-month rolling sum).	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Each time the storage tank is filled, obtain supplier certification that the fuel meets the definition of distillate oil and contains less than or equal to than 0.34 percent sulfur by weight. Fuel supplier certification shall include, at a minimum, the name of the supplier, address of the supplier, sulfur content of fuel, and a statement that the fuel meets the definition of distillate oil.	Title I Condition: To avoid classification as a major modification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Power Production: Each day of operation, calculate and record the total kilowatts of power production for each 8-hour Block Average. Divide the total quantity of power produced in each 8-hour block by the total operating time in the 8-hour block. Down time of 15 or more minutes is not to be included as operating time.	Minn. R. 7007.0800, subp. 4, Minn. R. 7007.0800, subp. 5
Install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within +/- 5.0 percent and shall be approved by the Administrator.	40 CFR Section 60.334(a); Minn. R. 7011.2350
The Permittee shall develop and keep on site a parameter monitoring plan which explains the procedures used to document proper operation of the NOX emission controls. The plan shall include the parameter(s) monitored and the acceptable range(s) of the parameter(s) as well as the basis for designating the parameter(s) and acceptable range(s). Any supplemental data such as engineering analyses, design specifications, manufacturer's recommendations and other relevant information shall be included in the monitoring plan.	40 CFR Section 60.334(g); Minn. R. 7011.2350
Monitor the sulfur content of the fuel being fired in the turbine. The sulfur content of the fuel must be determined using total sulfur methods described in 40 CFR Section 60.335(b)(10): a minimum of three fuel samples shall be collected during the test. Analyze the samples for the total sulfur content of the fuel using ASTM D129-00, D2622-98, D4294-02, D1266-98, D5453-00, or D1552-01. The fuel analysis may be performed by the Permittee, a service contractor retained by the Permittee, the fuel vendor, or any other qualified agency.	40 CFR Section 60.334(h)(1); 40 CFR Section 60.335(b)(11); Minn. R. 7011.2350

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Sulfur Monitoring Method: Use one of the total sulfur sampling options and the associated sampling frequency described in sections 2.2.3, 2.2.4.1, 2.2.4.2, and 2.2.4.3 of appendix D to 40 CFR Part 75 (i.e., flow proportional sampling, daily sampling, sampling from the unit's storage tank after each addition of fuel to the tank, or sampling each delivery prior to combining it with fuel oil already in the intended storage tank).	40 CFR Section 60.334(i)(1); Minn. R. 7011.2350
Recordkeeping: Maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the facility including; any malfunction of air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b), Minn. R. 7019.0100, subp. 1
REPORTING REQUIREMENTS	hdr
Notification of any physical or operational change which increases emission rate: due 60 days (or as soon as practical) before the change is commenced. Within 180 days of completion of any physical or operational change subject to the control measures specified in 60.14(a), compliance with all applicable standards must be achieved.	40 CFR Section 60.7(a)(4); Minn. R. 7019.0100, subp. 1
EER Reporting Requirements for turbines using water or steam to fuel ratio monitoring: (A) An excess emission shall be any unit operating hour for which the average steam or water to fuel ratio, as measured by the monitoring system, falls below the acceptable steam or water to fuel ratio needed to demonstrate compliance with 40 CFR Section 60.332, as established during the performance test. Any unit operating hour in which no water or steam is injected into the turbine shall be considered an excess emission. (B) A period of monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but the essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid.	40 CFR Section 60.334(j)(1)(i); Minn. R. 7011.2350
continued from above... (C) Each report shall include the average steam or water to fuel ratio, average fuel consumption, ambient conditions (temperature, pressure, and humidity), gas turbine load, and (if applicable) the nitrogen content of the fuel during the excess emission. You do not have to report ambient conditions if you opt to use the worst case ISO correction factor as specified in 40 CFR Section 60.334(b)(3)(ii), or if you are not using the ISO correction equation under the provisions of 40 CFR Section 60.335(b)(1).	40 CFR Section 60.334(j)(1)(i); Minn. R. 7011.2350
For SO ₂ , if the option to sample each delivery of fuel oil has been selected, the Permittee shall immediately switch to one of the other oil sampling options if the sulfur content of a delivery exceeds 0.8 weight percent. The owner or operator shall continue to use one of the other sampling options until all of the oil from the delivery has been combusted, and shall evaluate excess emissions according to 40 CFR Section 60.334(j)(2)(i). When all of the fuel from the delivery has been burned, the owner or operator may resume using the as-delivered sampling option.	40 CFR Section 60.334(j)(2)(ii); Minn. R. 7011.2350
Ice Fog: Each period during which an exemption provided in 40 CFR Section 60.332(f) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time the air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter.	40 CFR Section 60.334(j)(3); Minn. R. 7011.2350
PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 36 months starting 08/31/2001 to measure NO _x concentration in the turbine exhaust. The next test is due before December 29, 2007. (This reflects an extension of 120 days from the deadline of August 31, 2007.)	Minn. R. 7017.2020, subp. 1; 40 CFR Section 60.8(a)

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: CE 001 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones**Associated Items:** EU 002 Boiler #2

What to do	Why to do it
The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits. However, if the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory, the cyclone must comply with the following requirements during the time credit for control is taken.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
The Permittee shall operate and maintain the cyclone in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
The Permittee shall operate and maintain the control device at all times that any emission unit controlled by the device is in operation. The Permittee shall document periods of non-operation of the control equipment.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 80 percent control efficiency	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 5 inches of water column unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop at least once every 24 hours when in operation.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored cyclone is in operation.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
Recordkeeping of Pressure Drop. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded pressure drop was within the range specified in this permit.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the cyclone or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the device. The Permittee shall keep a record of the type and date of any corrective action taken for the control device.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: CE 002 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones**Associated Items:** EU 003 Boiler #4

What to do	Why to do it
The operation of this piece of control equipment is not necessary in order for the process to meet applicable emissions limits when only natural gas is combusted. However, if the Permittee wishes to take credit for its operation for the purposes of reporting actual emissions for emission inventory, the cyclone must comply with the following requirements during the time credit for control is taken.	Minn. Stat. 116.07, subd. 4a; Equipment used under Minn. R. 7019.3020 (G)
The Permittee shall operate and maintain this control device at all times that the boiler is combusting coal.	Minn. R. 7007.0800, subp. 2 and 16
The Permittee shall operate and maintain CE002 in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	40 CFR Section 64.3; Minn. R. 7017.0200
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 5 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change.	40 CFR Section 64.7; Minn. R. 7017.0200
The Permittee shall record the pressure drop at least once every 24 hours when in operation.	
Recordkeeping of Pressure Drop - The pressure drop shall be measured at least once every 24 hours. The Permittee shall record the time and date of each pressure drop reading and whether or not the recorded value was within the range specified in this permit. Recorded values outside the pressure drop range specified in this permit are considered Deviations as defined by Minn. R. 7007.010, subp. 8a. The deviation must be reported in the Semiannual Deviations Report listed in Table B of this permit.	40 CFR Section 64.3; Minn. R. 7017.0200
Periodic Inspections: At least once each calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	40 CFR Section 64.3; Minn. R. 7017.0200
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained, including maintaining the necessary parts for routine repairs of the monitoring equipment, when the monitored cyclone is in operation.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall calibrate each pressure gauge at least once every calendar year and shall maintain a written record of any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - the recorded opacity (at MR003) is above 20 percent; - the recorded pressure drop is outside the required operating range; or - the multiclone or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for CE002. The Permittee shall keep a record of the type and date of any corrective action taken for the device.	40 CFR Section 64.7(d); Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an exceedance (as defined in 40 CFR Section 64.1) while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring changes.	40 CFR Section 64.7(e); Minn. R. 7017.0200

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

<p>As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64:</p> <p>1) Summary information on the number, duration, and cause of exceedances (as defined in 40 CFR Section 64.1), as applicable, and the corrective actions taken; and</p> <p>2) Summary information on the number, duration, and cause for monitor downtime incidents.</p>	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
<p>The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.</p>	40 CFR Section 64.9(b); Minn. R. 7017.0200

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

09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

Subject Item: MR 003 Opacity Monitor**Associated Items:** CM 002 Boiler 4: 20% Opacity, EU003, 6-min ave.

EU 003 Boiler #4

What to do	Why to do it
COMS Monitoring Data: Owners or Operators of all COMS shall reduce all data to 6 minute averages. Opacity averages shall be calculated from all equally spaced consecutive 10-second (or shorter) data points in the 6 minute averaging period.	Minn. R. 7017.1200, subp. 1, 2 & 3; 40 CFR Section 64.7(c); Minn. R. 7017.0200
Continuous Operation: COMS 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 COMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.	Minn. R. 7017.1090, subp. 1
Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	
QA Plan Required: Develop and implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1.	Minn. R. 7017.1210, subp. 1
COMS QA/QC: The owner or operator of an affected facility is subject to the performance specifications listed in 40 CFR pt. 60, Appendix B and shall operate, calibrate, and maintain each COMS according to the QA/QC procedures in Minn. R. 7017.1210.	Minn. R. 7017.1210
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily. The COMS must be adjusted whenever the calibration drift (CD) exceeds twice the specification of PS-1 of 40 CFR 60, Appendix B.	Minn. R. 7017.1210, subp. 2
COMS Calibration Error Audit: due before end of each calendar half-year following COMS Certification Test. Conduct three point calibration error audits at least 3 months apart but no greater than 8 months apart. Conduct audits in accordance with Minn. R. 7017.1210, subp. 3.	Minn. R. 7017.1210, subp. 3
Attenuator Calibration: The Permittee shall have an independent testing company conduct calibrations of each of the neutral density filters used in the calibration error audit according to the procedure in Code of Federal Regulations, Title 40, Part 60, Appendix B, Section 7.1.3.1 within the time frame of opacity stability guaranteed by the attenuator manufacturer. The manufacturer's guarantee of stability shall be on site available for inspection.	Minn. R. 7017.1210, subp. 4
Recordkeeping: The owner or operator must retain records of all COMS 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

TABLE B: SUBMITTALS

B-1 09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power
Permit Number: 01500010 - 006

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

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

Send submittals that are required 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

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 by the Acid Rain Program to:

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

Send any application for a permit or permit amendment to:

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

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.

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Protocol	<p>due 1,096 days after Notification that total facility actual emissions exceeded 100 tons of PM10, or 250 tons of SO2, or 1000 tons of NOX, during the previous calendar year.</p> <p>This protocol will describe the proposed modeling methodology and input data, in accordance with MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	Total Facility
Computer Dispersion Modeling Results	<p>due 1,462 days after Notification that total facility actual emissions exceeded 100 tons of PM10, or 250 tons of SO2, or 1000 tons of NOX, during the previous calendar year.</p> <p>The results are to be submitted after the MPCA has reviewed and approved the modeling protocol. The submittal should adhere to MPCA modeling guidance for Title V air dispersion modeling analyses. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.</p>	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup. This triggers testing listed at Subject Item EU003.	CE003
Testing Frequency Plan	due 60 days after Initial Performance Test for total particulate matter emissions and opacity. The plan shall specify a testing frequency using the initial performance test data and MPCA test frequency guidance. Future performance tests at year (12-month), 36-month, and 60-month intervals, or as applicable, shall be required on written approval of MPCA per Minn. R. 7017.2020, subp. 1.	EU003

TABLE B: RECURRENT SUBMITTALS**B-3** 09/04/07

Facility Name: New Ulm Public Utilities-Municipal Power

Permit Number: 01500010 - 006

What to send	When to send	Portion of Facility Affected
COMS Audit Results Summary	due 30 days after end of each calendar quarter following Permit Issuance in which the COMS calibration error audit was completed.	MR003
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter starting 06/17/2002. See Table A, Subject Item EU 005, for details on what to report.	EU005
Semiannual Deviations Report	due 31 days after end of each calendar half-year starting 09/16/1999. 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 starting 09/16/1999 (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B: Insignificant Activities**Facility Name:** New Ulm Public Utilities-Municipal Power**Permit Number:** 01500010-006**Insignificant Activities and Applicable Requirements**

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

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <ul style="list-style-type: none">▪ Space heaters on site	Minn. R. 7011.0510/0515
3(G)	Emissions from a laboratory, as defined in the subpart. <ul style="list-style-type: none">▪ Permittee has a water testing lab on site.	Minn. R. 7011.0710/0715
3(H)	Miscellaneous:	
	3. brazing, soldering or welding equipment; <ul style="list-style-type: none">▪ Welding equipment on site	Minn. R. 7011.0510/.0515 + Minn. R. 7011.0610 + Minn. R. 7011.0710/0715
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. <ul style="list-style-type: none">▪ Fuel oil storage tank▪ Parts washer▪ Ash silo (may become significant when Permittee commences coal combustion)▪ Miscellaneous activities associated with coal handling (storage pile, delivery/dump trucks, coal drop to boiler) (these may become significant when Permittee commences coal combustion)	Minn. R. 7011.0710/0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 01500010-006

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

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Facility Address (SIC Code: 4931)
New Ulm Public Utilities – Municipal Power 100 North Broadway New Ulm, MN 56073	310 North 1 st Street New Ulm Brown County
Contact: Gary Domeier Phone: 507-359-8240	

1.2. Description of the Permit Action

This facility is a municipal electric utility that provides electricity and district steam heat. The facility operates three boilers (boilers No. 1 and 2 are natural gas-fired and boiler No. 4 is natural gas- and coal-fired) and two simple cycle distillate oil-fired combustion turbine generators (gas turbine Nos. 5 and 7). Gas turbine No. 7 is a peaking unit. A fourth boiler (boiler No. 3) is retired and not permitted to operate.

Total generating capacity is 75.5 megawatts, with 51 megawatts produced by the gas turbines. According to 40 CFR § 72.6(b)(1) and (2), none of the electric generating equipment is subject to Title IV (Acid Rain requirements) because all units commenced operation before November 15, 1990.

The facility is located in an area that is designated in attainment with ambient air standards or unclassified for all pollutants. Very little coal has been used by this facility in recent years, and therefore coal storage, coal handling, and ash handling have been defined as insignificant activities as defined in Minn. R. 7007.1300, subp. 4.

The facility has not combusted coal during the term of the existing permit. However, the authority to burn coal has been maintained in the permit, and the boiler remains capable of burning coal. For basically public relations reasons, the facility has agreed to install either a fabric filter or an electrostatic precipitator (ESP) prior to combusting coal in the future.

1.3 Description of any Changes Allowed with this Permit Issuance

No new physical changes are authorized in this permit. The initial Title V permit allowed combustion of coal provided additional control (fabric filter or ESP) is first installed. That authority is maintained in this permit.

In the previously issued Title V permit, EU001 had an SO₂ limit of 0.05 lb/MMBtu, with a citation indicating this was needed for NAAQS compliance. The unit is limited to combusting only natural gas, and the potential SO₂ emissions are approximately 0.0006 lb/MMBtu heat input. The limit of 0.05 lb/MMBtu was removed.

There are some additional restrictions that were added through this permit action. In GP001, the permit initially allowed combustion of natural gas only in the boilers (EU001, EU002, and/or EU003) when EU004 is in operation and combusting fuel oil. During the term of the permit, a new gas turbine was added to the facility, but was not added to the restriction in GP001. That has been corrected here.

There has also been a restriction added on the amount of coal that may be combusted in EU003. The purpose of this is so that the facility remain a non-major source to avoid the requirements of the Subpart DDDDD NESHAP.

1.4 Description of All Amendments Issued Since the Issuance of the Last Total Facility Permit

Permit Number and Issuance Date	Action Authorized
01500010-001 September 16, 1999	Initial Title V permit issued
01500010-002 March 15, 2000	Administrative amendment extending a testing deadline
01500010-003 October 26, 2000	Major amendment for installation of a simple cycle combustion turbine (EU005)
01500010-004 June 21, 2001	Major amendment authorizing additional extension of the testing deadline already extended in 01500010-002
01500010-005 June 17, 2002	MPCA-initiated major amendment to incorporate operating parameters documented during stack testing

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	31.8	30.3	1139	1841	181.5	9.6	9.0	15.4
Total Facility Actual Emissions (2005)	0.70	0.70	0.26	58.14	20.11	1.35	HAPs not reported in emission inventory	

Table 2. Facility Classification

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

2.

Regulatory and/or Statutory Basis

New Source Review

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

Part 70 Permit Program

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

New Source Performance Standards (NSPS)

EU005 is subject to NSPS Subpart GG – Standards of Performance for Stationary Gas Turbines.

EU004 was installed prior to October 3, 1977, and therefore is not subject to NSPS Subpart GG. Also, NSPS Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, which includes requirements for existing engines, explicitly excludes Gas Turbines.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

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

Compliance Assurance Monitoring (CAM)

CAM applies when combusting coal in Boiler 4, since the boiler does have PM controls and uncontrolled particulate matter (PM and PM₁₀) is greater than 100 tpy. While the permit requires the installation of either a baghouse or an electrostatic precipitator (ESP) before coal can actually be combusted, only the existing cyclone is required for Boiler 4 to meet the applicable PM emission limit in Minnesota Rules. Therefore, the cyclone is subject to CAM. Since the permitted PM and PM₁₀, considering the coal usage limit and operation of the cyclone, is less than 100 tpy, the requirements for “other” PSEUs apply – monitoring is required once per 24 hour period. CAM does not apply to the future baghouse or ESP, since they are not relied upon to meet an emission limit. However, upon installation of either the baghouse or ESP, the Permittee may request that the baghouse or ESP be considered the primary control unit relied upon to meet the emission limit, and have the CAM requirements in the permit modified accordingly.

Minnesota State Rules

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

- Minn. R. 7011.0510 Standards of Performance for Existing Indirect Heating Equipment
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
GP001	Minn. R. 7009.0020	Operating Restriction: While EU004 and/or EU005 is operating and combusting fuel oil, the three boilers (EU001, EU002, EU003) are restricted to combusting only natural gas. This is to ensure emissions do not cause a violation of ambient standards.

EU, GP, or SV	Applicable Regulations	Comments:
EU001, EU002, EU003	Minn. R. 7007.0510	Standards of Performance for Existing Indirect Heating Equipment. Determination of applicable limit from rule: <ul style="list-style-type: none"> the units were constructed in 1941, 1948, & 1965; the facility is located outside the cities in Table I; the unit capacity is less than 250 MMBtu/hr; and the facility has greater than 250 MMBtu/hr of indirect heating equipment.
EU003	Title I Condition to avoid 40 CFR § 63.2	Limit on quantity of coal that can be combusted, to avoid major source classification under Part 63
EU004	Minn. R. 7011.2300	Unit was constructed/installed in 1973, and therefore is not subject to NSPS Subpart GG.
EU005	40 CFR 60, Subpart GG	Unit was constructed/installed in 2000, and so is subject to Subpart GG.

The language “This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act” refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by U.S. EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

3. Technical Information

3.1 Calculations of Potential to Emit

Attachment 2 to this TSD contains the spreadsheets used to calculate potential emissions, a summary of the potential emissions, and a report of the actual emissions reported for 2005. Emissions were calculated based on published emission factors, using equipment capacity and federally enforceable restrictions contained in the permit.

3.2 Periodic Monitoring

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

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

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

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

Table 4. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
EU001	PM \leq 0.6 lb/MMBtu (Minn. R. 7011.0510)	None	Potential PM emissions based on equipment capacity, allowed fuels, and published emission factors is approximately 0.0072 lb/MMBtu; noncompliance is unlikely.
	Opacity < 20% except for 1 hourly excursion of up to 60 % (Minn. R. 7011.0510)	None	Fuel is limited to natural gas. Visible emissions are unlikely.
EU002	PM \leq 0.6 lb/MMBtu (Minn. R. 7011.0510)	None	Potential uncontrolled PM emissions based on equipment capacity, allowed fuels, and published emission factors is approximately 0.0072 lb/MMBtu; noncompliance is unlikely. Permittee operates a cyclone on this unit, but it is not required in order to meet the applicable emission limit.
	Opacity < 20% except for 1 hourly excursion of up to 60 % (Minn. R. 7011.0510)	None	Fuel is limited to natural gas. Visible emissions are unlikely.
EU003	PM \leq 0.6 lb/MMBtu (Minn. R. 7011.0510)	None when burning natural gas When burning coal, Permittee is required to operate existing cyclone, and to install a new baghouse or ESP. Compliance testing is required upon startup and periodically thereafter	Potential PM emissions based on equipment capacity, allowed fuels, and published emission factors (for gas) is approximately 0.0072 lb/MMBtu; noncompliance is unlikely.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
EU003, cont.	Opacity < 20% except for 1 hourly excursion of up to 60 % (Minn. R. 7011.0510)	None when burning natural gas COMS when burning coal. When burning coal, compliance testing is required upon startup and periodically thereafter	Fuel is limited to natural gas. Visible emissions are unlikely.
	Coal usage limited to 15000 tons per year (Title I condition to avoid 40 CFR § 63.2)	Recordkeeping	
EU004	SO ₂ ≤ 0.5 lb/MMBtu (Minn. R. 7011.2300)	None	Fuel is drawn from the same tank as fuel for EU005, which is limited to 0.34 percent sulfur by weight. An emission rate of 0.5 lb/MMBtu is maintained when sulfur content is 0.496 percent or less.
	Opacity < 20% once operating temperature is achieved (Minn. R. 7011.0510)	Periodic stack testing	Performance testing for opacity was completed in July 2006. Based on the results of that test (no visible emissions), a test frequency of every 5 years has been established.
EU005	NO _x ≤ 75 ppm at 15% O ₂ on a dry basis (40 CFR 60, Subpart GG)	Periodic stack testing	Initial performance testing has been completed. Based on the results, a test frequency of every 36 months has been established.
	Sulfur content of fuel < 0.8 percent by weight (40 CFR 60, Subpart GG) Sulfur content of fuel < 0.34 percent by weight (Title I condition to avoid classification as a major mod at the time of installation)	Recordkeeping	Compliance with the Title I limit ensures compliance with the NSPS limit.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
EU005, cont.	Fuel usage limited to 1625647 gallons per year (Title I condition to avoid classification as a major mod at the time of installation)	Recordkeeping	

3.3 Insignificant Activities

New Ulm Public Utilities has several operations which are classified as insignificant activities. These are listed in Appendix B to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities.

Table 5. Insignificant Activities

Insignificant Activity	General Applicable Emission limit	Discussion
Fuel use: space heaters fueled by, kerosene, natural gas, or propane	PM \leq 0.6 or 0.4 lb/MMBtu, depending on year constructed Opacity \leq 20% with exceptions (Minn. R. 7011.0510/515)	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.
Emissions from a laboratory, as defined in Minn. R. 7007.1300, subp. 3(G)	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0710/715)	The Permittee operates a water testing laboratory, which would typically not even have any emissions. It is highly unlikely that they could violate the applicable requirement.
Brazing, soldering or welding equipment	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0710/715)	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.

Insignificant Activity	General Applicable Emission limit	Discussion
Individual units with potential emissions less than 1000 lb/year of certain pollutants	PM, variable depending on airflow Opacity \leq 20% (with exceptions) (Minn. R. 7011.0715)	There is a single fuel oil storage tank and a parts washer, both of which are unlikely to have PM or visible emissions, and therefore unlikely to violate the emission limit. There is an ash silo. However, until the Permittee actually starts combusting coal, there is no ash to deal with. The potential exists for operation of the coal yard, including storage and handling of coal, and delivery of coal to facility and boiler. However, until the Permittee starts to combust coal, these activities are considered insignificant. They were classified as insignificant in the previously issued Title V permit.
Individual units with actual emissions less than 2000 lb/year of certain pollutants, and HAP emissions below thresholds in Minn. R. 7007.1300, subp. 4	PM, variable depending on airflow Opacity \leq 20% (with exceptions) (Minn. R. 7011.0715)	There is a cooling tower, with reported actual emissions of 0.01 tpy. Visible emissions will be mostly steam. It's impractical to measure PM emissions. HCl is used to treat boiler water. It is unlikely that there would be PM or visible emissions from this operation.

3.4 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

3.5 Comments Received

Public Notice Period: July 12, 2007 – August 10, 2007

EPA 45-day Review Period: July 12, 2007 – August 27, 2007

Comments were not received from the public or EPA during the associated notice/review periods. No changes have been made to the permit since beginning the public notice period.

4. Conclusion

Based on the information provided by New Ulm Public Utilities, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 01500010-

006 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Toni Volkmeier (permit writer/engineer)
 Sarah Kilgriff (enforcement)
 Andy Place (stack testing)
 Chris Buntjer (peer reviewer)

AQ File No. 709; DQ 228 & 406

Attachments: 1. CAM Plan
 2. PTE Summary and Calculation Spreadsheets
 3. Facility Description and CD-01 Forms

Attachment 1

CAM Plan

New Ulm Public Utilities – Municipal Power
Compliance Assurance Monitoring (CAM) Plan

1. APPLICABILITY

- 1.1. Control Technology: Cyclone
- 1.2. Pollutants
 - 1.2.1. Primary: Particulate matter (PM)
 - 1.2.2. Other: Heavy metals
- 1.3. Process/Emissions Unit: EU 003, Boiler #4 when burning coal
- 1.4. Performance Criteria: 80% control of PM

2. MONITORING APPROACH DESCRIPTION

- 2.1. Indicators Monitored: Pressure differential.
- 2.2. Rationale for Monitoring Approach: Control efficiency increases with increasing pressure differential; however, if pressure differential exceeds the specified maximum value, turbulence becomes excessive and control efficiency decreases.
- 2.3. Monitoring Location: Gas inlet and outlet ducts.
- 2.4. Analytical Devices Required: Differential pressure gauge, specific device to be determined prior to start of coal combustion in the unit
- 2.5. Data Acquisition and Measurement System Operation
 - 2.5.1. Frequency of measurement: Once per day
 - 2.5.2. Reporting units: Inches of water column (in. w.c.)
 - 2.5.3. Recording process: Operators log data manually.
- 2.6. Data Requirements
 - 2.6.1. Cyclone manufacturer's design specifications and efficiency curve/equation for pressure differential.
 - 2.6.2. Baseline pressure differential measurements concurrent with emission test, to be conducted 180 days after initial start of combustion of coal.
 - 2.6.3. Historical plant records of pressure differential measurements.
- 2.7. Specific QA/QC Procedures
 - 2.7.1. Calibrate, maintain, and operate instrumentation using procedures that take into account manufacturer's specifications.

3. SECONDARY MONITORING APPROACH DESCRIPTION

- 3.1. Indicators Monitored: Opacity, using Continuous Opacity Monitor (COMS), United Science Incorporated, Model 550.
- 3.2. Rationale for Monitoring Approach: Opacity is an indicator of control device performance. An increase in opacity or visible emissions generally corresponds to a decrease in cyclone performance.
- 3.3. Monitoring Location: Gas outlet duct.
- 3.4. Analytical Devices Required: Optical transmissometer
- 3.5. Data Acquisition and Measurement System Operation
 - 3.5.1. Frequency of measurement: Continuous to data acquisition system, reduced to six-minute averages.
 - 3.5.2. Reporting units: Opacity (percent).
 - 3.5.3. Recording process: Recorded automatically to data acquisition system.
- 3.6. Data Requirements
 - 3.6.1. Cyclone manufacturer's design specifications and efficiency curve/equation for opacity.

- 3.6.2. Baseline opacity measurements concurrent with emission test, to be conducted 180 days after initial start of combustion of coal.
 - 3.6.3. Historical plant records of opacity measurements.
- 3.7. Specific QA/QC Procedures
 - 3.7.1. Calibrate, maintain, and operate instrumentation using procedures that take into account manufacturer's specifications.
 - 3.7.2. Includes daily calibration drift check and semi-annual calibration error audit

Attachment 2

Calculations and PTE Summary

Attachment 3

Facility Description & CD-01 Forms