

**AIR EMISSION PERMIT NO. 10700012- 002
IS ISSUED TO**

Northern States Power Company

Viking Gas Transmission - NSP - Ada
Rural Route 1 Box 22
Ada, Norman County, Minnesota 56510

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
September 15, 1995

This permit authorizes the permittee to 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 as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: Federal; Part 70

Major Amendment

Issue Date: October 8, 1997

June 8, 1999

Expiration: October 8, 2002

All Title I Conditions do not expire.

Don Smith

Rodney E. Massey
District Manager
South District

for

Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

DL: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 provision of the applicable requirement identified in the permit as the basis of each condition. Certain requirements which have been determined not to apply are listed in Table A of this permit.

The permit shield, however does not apply to:

- 1. Any national ambient air quality standards adopted under section 109 of the Clean Air Act or increment or visibility under Part C of Title I of the Clean Air Act, except standards for Nitrogen Oxides (NO_x).**
- 2. Any state ambient air quality standard under Minn. R. ch. 7009, except standards for NO_x.**
- 3. The state noise pollution control rules, Minn. R. ch. 7030**

FACILITY DESCRIPTION:

The facility is a natural gas compressor station located in Ada, Minnesota. The station consists of three reciprocating engines, one water jacket heater, one reciprocating engine/ emergency generator and one turbine engine all of which burn natural gas. Three of the reciprocating engines and the turbine engine drive compressors which compress natural gas in the pipeline, causing the gas to flow to the next compressor station. The fourth reciprocating engine serves an emergency generator. The engines and water jacket heater are only capable of burning natural gas.

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

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
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)
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
Operating and/or production limits will be placed on emission units based on operating conditions during compliance testing. Limits set as a result of a compliance test (conducted before or after permit issuance) apply until new operating/production limits are set following formal review of a performance test as specified by Minn. R. 7017.2025.	Minn. R. 7017.2025
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.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
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
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. 1
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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. 7007.0800, subp. 6(A)
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
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

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
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)
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.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source, or a designated site, for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at the stationary source, or designated site, include all calibration and maintenance records, all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
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 federally enforceable.	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)
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

Subject Item: GP 001 Internal Combustion Engines

Associated Items: EU 001 Reciprocating Engine #1A
EU 002 Reciprocating Engine #2A
EU 003 Reciprocating Engine #3A
EU 004 Reciprocating Engine-Emergency Generator
EU 006 Turbine Engine #1

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (applies individually to each emission unit in GP 001).	Minn. R. 7011.2300, subp. 2
Fuel Type Restriction: Natural Gas only	Minn. R. 7007.0800, subp. 2
Fuel Type Recordkeeping: The Permittee shall keep a record of the type of fuel combusted in the emission units in GP 001. Fuel type records shall be entered no less frequently than once at the end of each calenderyear.	Minn. R. 7007.0800, subp. 5
Refer to subject Item EU 004 and EU 006 for additional requirements that apply to EU 004 and EU 006.	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

Subject Item: EU 004 Reciprocating Engine-Emergency Generator**Associated Items:** GP 001 Internal Combustion Engines

SV 004

What to do	Why to do it
Operating Hours: less than or equal to 720 hours/year for EU004 when EU001, EU002, EU003 or EU006 are also in operation. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7009.0020; Minn. R. 7009.0080
Recordkeeping: By the end of each month, calculate and record the EU004 operating hours for the previous month, for all periods when EU001, EU002, EU003 or EU006 were also operating. By January 30th of each calendar year, calculate and record the EU004 operating hours for the previous calendar year for all periods when EU001, EU002, EU003, or EU006 were also operating.	Minn. R. 7007.0800, subp. 5(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

Subject Item: EU 005 Water Jacket Heater**Associated Items:** SV 005

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.6 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
Operating Hours: less than or equal to 2,150 hours/year for EU005 when EU001, EU002, EU003 or EU006 are also in operation. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7009.0020; Minn. R. 7009.0080
Recordkeeping: By the end of each month, calculate and record the EU005 operating hours for the previous month, for all periods when EU001, EU002, EU003 or EU006 were also operating. By January 30th of each calendar year, calculate and record the EU005 operating hours for the previous calendar year for all periods when EU001, EU002, EU003, or EU006 were also operating.	Minn. R. 7007.0800, subp. 5(C)
Fuel Type Restriction: Natural Gas Only.	Minn. R. 7007.0800, subp. 2
Fuel Type Recordkeeping: The Permittee shall keep a record of the type of fuel combusted in EU 005. Fuel type records shall be entered no less frequently than once at the end of each calendar year.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

Subject Item: EU 006 Turbine Engine #1**Associated Items:** CE 001 Other

GP 001 Internal Combustion Engines

SV 006

What to do	Why to do it
Analysis of fuel sulfur content of the natural gas shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternative method. The reference methods are: ASTM D1072-80; ASTM D3246-81; and ASTM D4084-82 as referenced in 40 CFR Section 60.335(b)(2).	40 CFR Section 60.334(d); Minn. R. 7011.2350
Sulfur Content of Fuel: less than or equal to 0.8 percent by weight	40 CFR Section 60.333(b); Minn. R. 7011.2350
Reporting: If there is a change in fuel supply, the Permittee must notify the MPCA of such change for re-examination of the custom fuel-monitoring schedule. A substantial change in fuel quality shall be considered as a change in the fuel supply.	40 CFR Section 60.334 (b); Minn. R. 7011.2350
Retain Records: Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any malfunction in the operation of an affected facility; any malfunction in the operation of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.	40 CFR Section 60.7(b)
Sulfur Monitoring: Shall be conducted twice monthly for six months. If this monitoring shows little variability in fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.	40 CFR Section 334(b); Minn. R. 7011.2350
Sulfur Monitoring: If the first two years of sulfur monitoring shows little variability in the fuel sulfur content, and indicates consistent compliance with 40 CFR 60.333, the sample analysis shall be conducted twice per annum. This monitoring shall be conducted during the first and third quarters of each calendar year.	40 CFR Section 334(b); Minn. R. 7011.2350
Notification of noncompliance: Should any sulfur analysis indicate noncompliance with 40 CFR Section 60.333, the Permittee shall notify the MPCA of such excess emissions and the custom fuel monitoring schedule shall be re-examined by the Administrator.	40 Section CFR 60.334(b); Minn. R. 7011.2350
Recordkeeping: Records of sample analysis and fuel supply pertinent to the custom fuel monitoring schedule shall be retained for a period of five (5) years, and be available for inspection by personnel of federal state and local air pollution control agencies.	40 CFR Section 60.334(b); Minn. R. 7011.2350

TABLE B: SUBMITTALS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada
Permit Number: 10700012 - 002

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

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Report	due 2 days after Discovery of Deviation (Discovery of Deviations Endangering Human Health or the Environment Report (written)). Submit a written description of any deviations endangering human health or the environment to the Commissioner. Include the following information in this written description: cause of the deviation; exact dates of the period of the deviation; if the deviation has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Total Facility

TABLE B: RECURRENT SUBMITTALS

06/08/99

Facility Name: Viking Gas Transmission - NSP - Ada

Permit Number: 10700012 - 002

What to send	When to send	Portion of Facility Affected
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 30 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. The report covers all deviations experienced during the calendar year.	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

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 10700012-002

This technical support document is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

1. General Information

Owner/Operator Address and Phone Number	Facility Address (SIC Code: 4922)
Northern States Power 414 Nicollet Mall Minneapolis, Minnesota 55402	Viking Gas Transmission Company RR 1 Box 22 Ada, Minnesota 56510

1.2 Description Of The Facility

The facility is a natural gas compressor station located in Ada, Minnesota. The station consists of the following natural gas-fire emission units: three reciprocating engine compressors, one water jacket heater, one reciprocating engine generator, and one combustion turbine compressor. The four compressors pressurize the natural gas in the pipeline causing it to flow to the next compressor station. The water jacket heater provides heat when the compressor engines and turbine are not operating.

1.3 Description of the Activities Allowed By This Permit Action

This amendment includes limitations on annual hours of operation for emission unit 004 and emission unit 005 to ensure that the facility will not cause or contribute to a violation of the annual National Ambient Air Quality Standard (NAAQS) for Nitrogen Dioxide (NO₂). Recordkeeping of hours of EU 004 and EU 005 operation when emission units 001, 002, 003, or 006 are also operating, is required. There are no emission increases associated with this permit action.

Permit has also been up dated to reflect changes in applicable requirements. The changes include: 1) Changed the SO₂ limit and Opacity Standard to reflect changes made to Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines 2) Changed notification language for shutdown/breakdown requirements as per change in Minn. R. 7019.1000.

1.4 Facility Emissions:

Table 1. Total Facility Potential to Emit Summary:

EU No.	SV No.	Emission Unit Description	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
001	001	Reciprocating Engine-1	0.53	0.53	0.03	178.7	22.60	4.36		17.08	17.2
002	002	Reciprocating Engine-2	0.53	0.53	0.03	178.7	22.60	4.36		17.08	17.2
003	003	Reciprocating Engine-3	0.53	0.53	0.03	178.7	22.60	4.36		17.08	17.2
004	004	Water Jacket Heater	0.16	0.16	0.01	1.31	0.28	0.05			
005	005	Generator	0.09	0.09	0.01	29.78	3.77	0.73			
006	006	Turbine Engine-1	6.87	6.87	0.02	32.87	57.18	6.82			

Total Facility Limited Potential Emissions*	8.71	8.71	0.13	600.06	129.03	20.68		51.24	51.06
Total Facility Actual Emissions	8.34	8.34	0.11	526.46	119.61	18.85		47.21	47.44

Table 2. Facility (TF) and Permit Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)	NO _x		
NAAR (list pollutant)			
Part 70 Permit Program (list pollutant)	NO _x , CO, HAPs		

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

Regulatory Overview of Units Affected by the Modification

Table 4. Regulatory Overview

Emission UnitNo.	Applicable Regulations	Comments
EU004	Title I Condition: to avoid violation of 40 CFR Section 50.11; Minn. R. 7009.0020	Limited to 720 hours per calendar year when operated in conjunction with emission units 001, 002, 003, or 006
EU005	Title I Condition: to avoid violation of 40 CFR Section 50.11; Minn. R. 7009.0020	Limited to 2,150 hours per calendar year when operated in conjunction with emission units 001, 002, 003, or 006
EU004, EU005	Title I Condition: recordkeeping to avoid violation of 40 CFR Section 50.11; Minn. R. 7007.0800, subp. 5(C)	The permittee shall maintain records of operating hours, to the nearest hour, for EU 004 and EU 005, when emission units 001, 002, 003, or 006 are also operating.

3. Technical Information

There are three operating scenarios included with this permit: 1) Emission unit 004 will not operate more than 720 hours per calendar year while emission units 001, 002, 003, or 006 are operating. Emission unit 005 will not operate more than 2,150 hours per calendar year while emission units 001, 002, 003, or 006 are operating, 2) Emission units 001, 002, 003 or 006 may operate 8760 hours per year, and 3) Emission units 004 and 005 may operate 8760 hours per year if they are the only two units in operation.

Emission units 004 and 005 will record the hours of operation for each 12-month calendar year when they are operated in conjunction with any other emission unit at the facility.

NSP may choose to include in the records, all EU 004/006 operating hours for a given month, and not just the EU 004/006 operating hours when the other emission units are also operating, for the sake of simplifying recordkeeping.

4. Conclusion

Based on the information provided by the Viking Natural Gas Compressor Station, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 10700012-002, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Denise M. Leezer and Marshall Cole

Attachment: CD-01 Forms