

AIR EMISSION PERMIT NO. 13100059- 001

IS ISSUED TO

Minnesota Department of Corrections

MINN CORRECTIONAL FACILITIES - FARIBAULT

1101 Linden Lane

Faribault, Rice County, MN 55021

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	Application Date	Issuance Date	Action Number
Total Facility Operating Permit	02/06/1996		001

This permit authorizes the Permittee to operate and construct 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: State; Limits to Avoid Pt 70/Limits to Avoid NSR

Issue Date: September 14, 2006

Expiration: Permit does not expire.
Title I Conditions do not expire.

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

for Brad Moore
Acting Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: Compliance Schedule (Not used in this permit)

Appendices: Insignificant Activities Required to be Listed

NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	(651) 296-6300
Outside Metro Area	1-800-657-3864
TTY	(651) 282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

The Minnesota Correctional Facility – Faribault, (MCF) is a medium security facility located on the southeastern edge of the city of Faribault, Minnesota. This permit serves two purposes. It is an issuance of the total facility permit required by Minnesota's operating permit rules, and it also incorporates and authorized modifications to the facility. The renovation is part of a multi-phase project to improve facility security and safety as well as expand capacity from 1,236 to 1,954 offenders. Construction is expected to proceed in July 2006 and be completed in the summer of 2008.

While the renovation project will expand inmate capacity and steam plant demand, the project will result in reduced annual emissions of Sulfur Dioxide (SO₂), the primary pollutant emitted from the existing system. Processes used as a part of the institution's work programs will not be physically expanded at this time. Synthetic operating limits, where necessary, are designed to allow for a second work shift. The following describes each emission source and any synthetic operating limits proposed to maintain state permit status.

Existing Steam Plant Boilers (GP001)

The existing steam plant houses three boilers (181 mmBtu/hr total) which operate with residual fuel oil as the primary fuel and natural gas as back-up. The boilers are served by a 120,000 gallon fuel oil storage tank. Potential emissions from these units are greater than the 100 ton/yr state permit thresholds. A synthetic minor operating limit of 92 tons per year of SO₂ (equivalent to 826,595 gallons per year of oil with a 1.4 percent sulfur content is proposed to limit the group SO₂ emissions to less than 95 tons/year.) In addition, a synthetic minor limit of 1,200 million cubic feet of natural gas is proposed to limit group nitrogen oxide emissions to less than 60 tons per year and facility wide potential emissions to less than 100 tons per year.

These boilers will continue to operate through the 2006-7 heating season.

New Steam Plant Boilers (GP002)

Three new natural gas/distillate oil-fired boilers are to be installed at the steam plant beginning in June of 2006. Each unit will have a thermal input capacity of 31.8 mmBtu/hr. These units are expected to be brought on-line before the beginning of the 2007-8 heating season. The boilers will be served by two smaller underground storage tanks, which will replace the existing residual oil storage system.

A synthetic operating limit of 2,222,222 gallons of distillate oil per year is proposed to maintain annual SO₂ potential emissions to less than 80 tons per year. No limits are required for natural gas.

Other Emission Sources

Other air emission sources on site include two emergency diesel engine generators, a batch thermoforming process, two paint booths, and a woodworking facility.

TABLE A: LIMITS AND OTHER REQUIREMENTS

A-1

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

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

Subject Item: Total Facility

What to do	Why to do it
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, and/or B.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit and completion of permit reopening and reissuance. If limits serve to cause more stringent operating conditions, resulting changes to facility operation need to be made immediately. If limits serve to relax current operating conditions, resulting changes to facility operation must not be made prior to issuance of permit amendment with new limit incorporated.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr
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)
RECORDKEEPING	hdr
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
REPORTING/SUBMITTALS	hdr
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

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

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Subject Item: GP 001 Residual Oil/Natural Gas Boilers**Associated Items:** EU 001 Boiler 1

EU 002 Boiler 2

EU 003 Boiler 3

What to do	Why to do it
EMISSION LIMITS	hdr
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 , except for one six-minute period per hour of not more than 60 percent. An exceedance of this opacity standard occurs whenever any one-hour period contains two or more six-minute periods during which the average opacity exceeds 20 percent or whenever any one-hour period contains one or more six-minute periods during which the average opacity exceeds 60 percent.	Minn. R. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 1.6 lbs/million Btu heat input	Title I Condition: to avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000. Also meets the requirements of Minn. R. 7011.0510, subp. 1
OPERATING CONDITIONS	hdr
Fuel Use: Limited to natural gas and residual oil	Minn. R. 7007.0800
Sulfur Content of Fuel: less than or equal to 1.5 percent by weight	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000 and Minn. R. 7007.0200
Fuel Usage: less than or equal to 766,667 gallons/year of residual oil based on a 12 month rolling sum. This limit applies to the boilers as a group.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
Fuel Usage: less than or equal to 1103.76 Other (mmcf/year) of natural gas based on a 12 month rolling sum. This limit applies to the boilers as a group.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
Do not operate Boilers 1, 2, and 3 (GP001) once operation of Boilers 4, 5, and/or 6 (GP002) has begun.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
RECORDKEEPING	hdr
Record the previous month's residual oil and natural gas useage in Boilers 1, 2, and 3 by the 15th of each month. Add this to the preceeding 11 month's usage to determine the 12 month rolling sum. Compare the results to the limit given above.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
Keep records of the sulfur content of each fuel oil delivery.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Subject Item: GP 002 Natural Gas/Distillate Oil Boilers**Associated Items:** EU 006 New Boiler #1

EU 007 New Boiler #2

EU 008 New Boiler #3

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent , except for one six-minute period per hour of not more than 27 percent. This limit applies at all times except during periods of startup, shutdown, or malfunction.	40 CFR Section 60.43c(c)
OPERATING CONDITIONS	hdr
Fuel Use: Limited to natural gas and distillate oil	Minn. R. 7007.0800
Sulfur Content of Fuel: less than or equal to 0.5 percent by weight . This limit applies at all times, including periods of startup, shutdown, and malfunction. Compliance with the fuel oil sulfur limit may be determined based on a certification from the fuel supplier.	40 CFR Section 60.42c(d) and (h)
Fuel Usage: less than or equal to 2222222 gallons/year of distillate oil based on a 12 month rolling sum. This limit applies to the boilers as a group.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
Do not operate Boilers 4, 5, and/or 6 (GP002) until the cessation of operation of Boilers 1, 2, and 3 (GP001) has occurred.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
PERFORMANCE TESTING	hdr
Performance Test: due 60 days after achieving maximum capacity from new boiler #1 but no more than 180 days after initial startup, for opacity.	40 CFR Section 60.45c(a)(8)
Performance Test: due 60 days after achieving maximum capacity from new boiler #2 but no more than 180 days after initial startup, for opacity.	40 CFR Section 60.45c(a)(8)
Performance Test: due 60 days after achieving maximum capacity from new boiler #3 but no more than 180 days after initial startup, for opacity.	40 CFR Section 60.45c(a)(8)
RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
Record the previous month's distillate oil and natural gas useage in Boilers 1, 2, and 3 by the 15th of each month. Add this to the preceeding 11 month's usage to determine the 12 month rolling sum. Compare the results to the limit given above.	Title I Condition: to avoid major source classification under 40 CFR Section 52.21, Minn. R. 7007.3000, and Minn. R. 7007.0200
Keep records of the sulfur content of each fuel oil delivery including fuel supplier certification. Submit reports for each calendar 1/2 year postmarked by the 30th day of the month following the end of the reporting period. The report shall include the following information: 1) Fuel supplier certification including: i) the name of the oil supplier; and ii) a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR Section 60.41c.	40 CFR Section 60.48c(e)(11)

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Subject Item: GP 003 Emergency Engine Generators**Associated Items:** EU 004 Power Plant Generator, Generator #1

EU 005 Generator #2

What to do	Why to do it
EMISSION LIMITS	hdr
Opacity: less than or equal to 20 percent using a 6-minute average 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	Minn. R. 7011.2300, subp. 2
OPERATING CONDITIONS	hdr
Fuel use limited to distillate oil with a sulfur content less than or equal to 0.5 percent by weight.	Minn. R. 7007.0800, subp. 2
MONITORING AND RECORDKEEPING	hdr
Obtain and keep a fuel supplier certification for each shipment of diesel fuel certifying that the sulfur content of the fuel meets the sulfur content limit. This requirement can be met by securing a fuel supplier contract which specifies the maximum amount of sulfur in the fuel to be delivered and by obtaining a receipt for each shipment which documents that the fuel was supplied by the same contractor.	Minn. R. 7007.0800, subp. 4 and 5

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Subject Item: GP 004 Paint Spray Booths**Associated Items:** EU 010 Spray Booth #1

EU 011 Spray Booth #2

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0175, subp. 1(B)
OPERATING CONDITIONS	hdr
Vent all emissions through a panel filter with a control efficiency of 92% or greater.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 10000 gallons/year based on a 12-month rolling sum.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2
MONITORING AND RECORDKEEPING	hdr
Record the previous month's material usage by the 15th of each month. Add the result to the preceding 11 month's material usage and compare to the limit. Record the results of the calculation.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2
POLLUTION CONTROL EQUIPMENT	hdr
The Permittee shall operate and maintain the panel filters any time that any process equipment controlled by the panel filters is(are) in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2 and 14
Daily Inspections: Once each operating day, the Permittee shall visually inspect the condition of each panel filter with respect to alignment, saturation, tears, holes and any other condition that may affect the filter's performance. The Permittee shall maintain a daily written record of filter inspections.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 4 and 5
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. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall 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 filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

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

09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

Subject Item: EU 012 Wood Shop Exhaust**Associated Items:** SV 012 Wood Working

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent	Minn. R. 7011.0175, subp. 1(B)
OPERATING CONDITIONS	hdr
Vent all emissions through a baghouse filter with a control efficiency of 99% or greater.	Minn. R. 7007.0800, subp. 2
POLLUTION CONTROL EQUIPMENT	hdr
The Permittee shall operate and maintain the filter any time that any process equipment controlled by the it is in operation. The Permittee shall document periods of non-operation of the control equipment.	Minn. R. 7007.0800, subp. 2 and 14
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. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: If the filters or any of their components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall 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 filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Operation and Maintenance of Filters: The Permittee shall operate and maintain each filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

TABLE B: SUBMITTALS

B-1 09/14/06

Facility Name: Minn Correctional Facilities - Faribault
Permit Number: 13100059 - 001

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

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

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial 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:

AQ Compliance Tracking Coordinator
Industrial 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**B-2** 09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

What to send	When to send	Portion of Facility Affected
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	GP002
Notification of the Date Construction Began	due 30 days after Start Of Construction. This notification shall include: 1) The design heat input capacity of the affected facility and identification of fuels to be combusted, 2) The annual capacity factor at which the owner or operator anticipates operating the affected boilers based on all fuels fired and on each individual fuel fired.	GP002
Testing Frequency Plan	due 60 days after Initial Performance Test for opacity for new Boiler #2. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP002
Testing Frequency Plan	due 60 days after Initial Performance Test for opacity for new Boiler #3. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP002
Testing Frequency Plan	due 60 days after Performance Test for opacity for new Boiler #1. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP002

TABLE B: RECURRENT SUBMITTALS**B-3** 09/14/06

Facility Name: Minn Correctional Facilities - Faribault

Permit Number: 13100059 - 001

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. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 30 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted to the Commissioner on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX MATERIAL

Facility Name:Minn Correctional Facilities - Faribault

Permit Number: 13100059-001

Insignificant Activities Required to be Listed

Rule Citation	Insignificant Activity	Applicable Requirements
Minn. R. 7007.1300, subp. 3(B)(2)	Radiant heaters located in selected buildings throughout facility	Minn. R. 7011.0515
Minn. R. 7007.1300, subp. 3(E)(1)	10,000 gallon gasoline storage tank	Minn. R. 7011.1505
Minn. R. 7007.1300, subp. 3(F)	Prison laundry	
Minn. R. 7007.1300, subp. 3(I)	Residual fuel storage tanks	
Minn. R. 7007.1300, subp. 3(I)	Four small emergency generators	Minn. R. 7011.2300
Minn. R. 7007.1300, subp. 3(I)	Small batch blending of cleaners, Adhesives spraying	

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13100059-001

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

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 9223)
Minnesota Department of Corrections 1450 Energy Park Drive Suite 200 St. Paul, MN 55108	1101 Linden Lane Faribault Rice County
Contact: Bruce Reiser Phone: (507) 334-0709	

1.2. Description of the Permit Action

The Minnesota Correctional Facility – Faribault, (MCF) is a medium security facility located on the southeastern edge of the city of Faribault, Minnesota. This permit serves two purposes. It is an issuance of the total facility permit required by Minnesota’s operating permit rules, and it also incorporates authorized modifications to the facility. The renovation is part of a multi-phase project to improve facility security and safety as well as expand capacity from 1,236 to 1,954 offenders. Construction is expected to proceed in July 2006 and be completed in the summer of 2008.

While the renovation project will expand inmate capacity and steam plant demand, the project will result in reduced annual emissions of Sulfur Dioxide (SO₂), the primary pollutant emitted from the existing system. Processes used as a part of the institution’s work programs will not be physically expanded at this time. Synthetic operating limits, where necessary, are designed to allow for a second work shift. The following describes each emission source and any synthetic operating limits proposed to maintain state permit status.

Existing Steam Plant Boilers (GP001)

The existing steam plant houses three boilers (181 mmBtu/hr total) which operate with residual fuel oil as the primary fuel and natural gas as back-up. The boilers are served by a 120,000

gallon fuel oil storage tank. Potential emissions from these units are greater than the 100 ton/yr state permit thresholds. A synthetic minor operating limit of 92 tons per year of SO₂ (equivalent to 826,595 gallons per year of oil with a 1.4 percent sulfur content is proposed to limit the group SO₂ emissions to less than 95 tons/year.) In addition, a synthetic minor limit of 1,200 million cubic feet of natural gas is proposed to limit group nitrogen oxide emissions to less than 60 tons per year and facility wide potential emissions to less than 100 tons per year.

These boilers will continue to operate through the 2006-7 heating season and then be shut down.

New Steam Plant Boilers (GP002)

Three new natural gas/distillate oil-fired boilers are to be installed at the steam plant beginning in June of 2006. Each unit will have a thermal input capacity of 31.8 mmBtu/hr. These units are expected to be brought on-line before the beginning of the 2007-8 heating season. The boilers will be served by two smaller underground storage tanks, which will replace the existing residual oil storage system.

A synthetic operating limit of 2,222,222 gallons of distillate oil per year is proposed to maintain annual SO₂ potential emissions to less than 80 tons per year. No limits are required for natural gas.

Other Emission Sources

Other air emission sources on site include two emergency diesel engine generators, a batch thermoforming process, two paint booths, and a woodworking facility.

1.3 Description of any Changes Allowed with this Permit Issuance

New Steam Plant Boilers (GP002)

Three new natural gas/distillate oil-fired boilers are to be installed at the steam plant beginning in June of 2006. Each unit will have a thermal input capacity of 31.8 mmBtu/hr. These units are expected to be brought on-line before the beginning of the 2007-8 heating season. The boilers will be served by two smaller underground storage tanks, which will replace the existing residual oil storage system.

A synthetic operating limit of 2,222,222 gallons of distillate oil per year is proposed to maintain annual SO₂ potential emissions to less than 80 tons per year. No limits are required for natural gas.

1.4. 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	59.3	59.3	95.8	98.4	54.2	35.8	4.8	4.67
Total Facility Actual Emissions (2005)	7.10	4.76	64.3	23.0	4.67	1.62	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 has accepted limits on fuel consumption and process throughput that restrict potential emissions to less than major source levels as defined by 40 CFR § 52.21.

Part 70 Permit Program

The facility has accepted limits on fuel consumption and process throughput that restrict potential emissions to less than major source levels as defined by 40 CFR § 70.2.

New Source Performance Standards (NSPS)

The three new boilers will be subject to 40 CFR Part 60, Subp. Dc.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a non-major source under 40 CFR pt. 63. Thus, no NESHAPs apply.

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. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0710 Standards of Performance for Pre-1969 Industrial Process Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
GP 001 Boilers 1-3	Minn. R. 7011.0510 40 CFR § 52.21	Minnesota Performance Standards for Indirect Heating Equipment Limits set on sulfur content and fuel usage to limit total facility potential emissions to less than major source levels as defined by 40 CFR § 52.21 and 40 CFR § 70.2.
GP002 Boiler 4-6	40 CFR Part 60, Subp. Dc 40 CFR § 52.21	Performance Standards for Small Commercial-Industrial Steam Generating Equipment Limits on sulfur dioxide emissions and fuel oil usage to limit total facility potential emissions to less than major source levels as defined by 40 CFR § 52.21 and 40 CFR § 70.2.
GP003 Emergency Engine Generators	Minn. R. 7011.2300	Performance Standards for Internal Combustion Engines
GP004 Paint Spray Booths	Minn. R. 7011.0715 40 CFR § 52.21	Standards of Performance for Industrial Process Equipment Limits on paint usage to limit total facility potential emissions to less than major source levels as defined by 40 CFR Section 52.21 and 40 CFR § 70.2.
EU012 Wood Shop	Minn. R. 7011.0715	Standards of Performance for Industrial Process Equipment

3. Technical Information

Calculations of Potential to Emit

Calculations are attached to this technical support document. Calculations were performed using the emission limit where appropriate, and accepted AP42 factors for those pollutants without an emission limit.

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
GP001 Boilers 1-3	PM \leq 0.6 lb/mmBtu Opacity \leq 20% Minnesota Performance Standards	None	No performance test because facility is phasing out oil usage and will only burn natural gas. AP42 factors for particulate emissions from natural gas burning are orders of magnitude lower than the limit, and opacity problems are not expected either. The boilers' use will be discontinued prior to, or during the 2007 heating season.
GP001 Boilers 1-3	Sulfur Dioxide \leq 1.6 lb/mmBtu, usage limited Title I Condition	Monitoring of fuel sulfur content and use	
GP002	Opacity \leq 20%	Performance Test	Performance test is required by the applicable new

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
Boilers 4-6	40 CFR Part 60, Subp. Dc		source performance standard
GP002 Boilers 4-6	Fuel use limited to 2,222,222 gallons per year Title I Condition	Monitoring of fuel usage	
GP002 Boilers 4-6	Sulfur Content of Fuel limited to \leq 0.5 % 40 CFR Part 60, Subp. Dc	Supplier certification	Sulfur content of fuel verification is specified by the applicable new source performance standard.
GP003 Emergency Engine Generators	Opacity \leq 20% Sulfur Dioxide \leq 0.5 lb/mmBtu Minn. R. 7011.2300	Monitoring of fuel type and sulfur content	Using only fuel oil with 0.5% sulfur or less will ensure compliance with the sulfur dioxide limit, and this more highly distilled oil is unlikely to cause opacity problems. No further monitoring is necessary.
GP004	PM \leq 0.3 gr/dscf Opacity \leq 20% Minn. R. 7011.0715	Maintenance and monitoring of panel filters	Those panel filters should provide the control efficiency necessary to meet the emission limits if properly maintained and operated.
GP004	Material Usage \leq 10,000 gallons per year 40 CFR § 52.21	Monitoring and recordkeeping of fuel use, calculation of annual use monthly	

3.2 Insignificant Activities

The Faribault Correctional Facility has several operations which are classified as insignificant activities. These are listed in the Appendix to the permit.

The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per U.S. Environmental Protection Agency (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: radiant heaters located in selected buildings throughout the facility	$PM \leq 0.6$ or 0.4 lb/MMBtu, depending on year constructed $Opacity \leq 20\%$ with exceptions (Minn. R. 7011.0510/515)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement.
Cleaning operations: laundry, not including dry cleaners and industrial launderers	$Opacity \leq 20\%$ (Minn. R. 7011.0105 or 7011.0110))	While no known emissions estimation method exists for these units, based on general knowledge of how they operate, it is highly unlikely that they could generate visible emissions.
10,000 gallon gasoline storage tank Residual oil tanks	Submerged fill pipe	The tanks are equipped with submerged fill pipes. No monitoring is necessary.
Four small emergency engine generators	$Opacity \leq 20\%$ (Minn. R. 7011.2300)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement.
Fugitive Emissions from unpaved roads and parking lots	Requirement to take reasonable measures to prevent PM from becoming airborne (Minn. R. 7011.0150)	The permit does contain a general requirement that this standard must be met.
Small batch blending of cleaners and adhesives spraying	No applicable requirements	

3.3 Comments Received

Public Notice Period: 8/16/06 – 9/14/06

No comments were received during the public comment period.

4. Conclusion

Based on the information provided by MCF, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13100059-001, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jenny Reinertsen (permit writer/engineer)
 Greg Berger (enforcement)
 Steve Gorg (stack testing)
 Marshall Cole (peer reviewer)

Attachments: 1. Calculation Spreadsheets