

AIR EMISSION PERMIT NO. 13700082- 001

IS ISSUED TO

NORTHERN CASTINGS CORPORATION

555 West 25th Street
Hibbing, St. Louis County, MN 55746

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

Permit Type	Application Date
Total Facility Operating Permit	06/15/1995

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Permit Type: State; Synthetic Minor NSR/PSD

Issue Date: May 7, 2002

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

Ann M. Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
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:

Northern Castings is a ductile iron foundry. The source consists of two electric induction furnaces, a holding furnace, pouring and cooling areas, a shakeout system, casting cleaning equipment, and a sand handling system.

The source's previous permit imposed emission limits which held the facility below 100 Tons Per Year (tpy) for all criteria pollutants. This permit likewise limits the facility to less than 100 tpy for criteria pollutants, and also to less than 25 tpy of total Hazardous Air Pollutants (HAP) and less than 10 tpy of individual HAPs, using a production limit rather than individual emission limits. The net result is a lower Potential To Emit (PTE) than previously permitted. Thus, the facility is now a non major source under Part 70 and under New Source Review.

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 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
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 shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment 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 the records kept to demonstrate plan implementation.	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
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit). If it is found that a particular piece of equipment can't be calibrated, the equipment may be replaced rather than calibrated.	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. 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

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
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)
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)
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)
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)
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
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
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)
Emission 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.	Minn. R. 7019.3000 through Minn. R. 7019.3010
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

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: GP 001 Melt Furnaces**Associated Items:** EU 001 Induction Furnace 1

EU 002 Induction Furnace 2

What to do	Why to do it
Material Usage: less than or equal to 39000 tons/year using 12-month Rolling Sum of metal melted. This limit applies to the two emission units together.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Production Limit: 13241.8 pounds per batch, based on total tons in a heat cycle. This limit applies individually to each furnace. The Permittee may not operate either emission unit at a higher production rate unless a performance test is conducted at a higher rate and MPCA staff determine compliance at that rate for that emission unit.	Minn. R. 7017.2025; Notice of Compliance dated June 29, 1995
Recordkeeping DAILY: Each day, record the quantity of metal melted, in tons. MONTHLY: By the 15th day of each month, calculate and record: a. The total quantity of metal melted during the previous month. b. The 12-month rolling sum of metal melted during the previous 12 months, by summing the 12 previous monthly metal melt quantities.	Title I Condition: Recordkeeping of limit used to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7011.3000; and under 40 CFR Section 70.2 and Minn. R. 7007.0200
Recordkeeping: The Permittee shall record the quantity of melted metal produced in each furnace batch.	Minn. R. 7007.0800, subp. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: GP 002 Make-up Air Units**Associated Items:** EU 046 Air Makeup Unit 3

EU 048 Air Makeup Unit 2

EU 049 Air Makeup Unit 1

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . This limit applies individually to each unit listed in this group. [Maximum PTE of each unit based on fuel combustion capacity is approximately 0.0075 lbs/million Btu heat input.]	Minn. R. 7011.0515, 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. This limit applies individually to each unit listed in this group.	Minn. R. 7011.0515, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 001 Induction Furnace Baghouse**Associated Items:** EU 001 Induction Furnace 1

EU 003 Ladle

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. 7011.0610, subp. 1(A)(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. 7011.0610, subp. 1(A)(2)
CONTROL REQUIREMENTS (CE001 - low temperature baghouse)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
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.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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: 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 fabric filter 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 fabric 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 002 Sand System**Associated Items:** EU 006 Batch Hopper

EU 008 Sand Mullor

EU 009 Shakeout

EU 010 Fluid Bed Cooler (sand)

EU 011 V Cooler (sand)

EU 039 Belt Conveyor 4

EU 040 Didion Feeder

EU 041 Sand Hopper

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 opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS (CE006 - wet scrubber)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 80 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 80 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 4 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Water flow rate: greater than or equal to 60 gallons/minute . The Permittee shall record the water flow rate once every 24 hours when in operation..	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Pressure Drop and Water Flow Rate. The Permittee shall record the time and date of each pressure drop reading and each water flow rate reading and whether or not the reading was within the range specified in this permit.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored scrubber is in operation.	Minn. R. 7007.0800, subp. 4
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: 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 recorded water flow rate is outside the required operating range; or - the scrubber 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 scrubber. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
TESTING REQUIREMENTS	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Performance Test: due 180 days after Permit Issuance to measure total particulate matter and opacity.	Minn. R. 7017.2020, subp. 1
Performance Test Notifications and Submittals (See Table B for additional 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	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 003 Finishing Area

Associated Items: EU 014 Tumblast Shotblast

EU 015 Grinder 1

EU 016 Grinder 2

EU 017 Grinder 3

EU 018 Grinder 4

EU 019 South Tumbler

EU 020 North Tumbler

EU 021 Inspection Grinder 1

EU 022 Inspection Grinder 2

EU 023 Inspection Grinder 3

EU 024 Inspection Grinder 4

EU 025 Inspection Grinder 5

EU 026 Inspection Grinder 6

EU 027 Inspection Grinder 7

EU 028 Inspection Grinder 8

EU 029 Grinder

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 opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS (CE004 - low temperature baghouse)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
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.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

<p>Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur:</p> <ul style="list-style-type: none">- the recorded pressure drop is outside the required operating range; or- the fabric filter or any of its components are found during the inspections to need repair. <p>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 fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.</p>	<p>Minn. R. 7007.0800, subp. 4, 5, and 14</p>
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TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 004 Despruing Area**Associated Items:** EU 030 Desprueing Area

EU 037 Conveyor Belt B

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 opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS (CE005 - low temperature baghouse)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 1 inches of water column and less than or equal to 5 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
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.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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: 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 fabric filter 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 fabric 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 010 Induction Furnace Baghouse**Associated Items:** EU 002 Induction Furnace 2

EU 003 Ladle

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. 7011.0610, subp. 1(A)(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. 7011.0610, subp. 1(A)(2)
CONTROL REQUIREMENTS (CE002 - low temperature baghouse)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
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.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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: 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 fabric filter 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 fabric 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

Subject Item: SV 011 Molding/Pouring/Cooling

Associated Items: EU 004 Mold Cooling Conveyor
EU 005 Belt Conveyor 2 (used sand)
EU 007 Sand Bin
EU 012 Sand Elevator
EU 013 Belt Conveyor 5 (sand)
EU 031 Conveyor Belt A (product)
EU 032 Handblast
EU 038 Belt Conveyor 3
EU 042 Mullor Feed Conveyor
EU 043 Sand screen
EU 044 Surge Bin
EU 047 Pouring/Cooling

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 opacity	Minn. R. 7011.0715, subp. 1(B)
CONTROL REQUIREMENTS (CE008 - low temperature baghouse)	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment is in operation. The Permittee shall operate and maintain the control equipment in accordance with the Operation and Maintenance (O & M) Plan.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Particulate Matter < 10 micron: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
Total Particulate Matter: greater than or equal to 99 percent collection efficiency	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: greater than or equal to 2 inches of water column and less than or equal to 8 inches of water column . The Permittee shall record the pressure drop once every 24 hours when in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
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.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; to avoid major source classification under 40 CFR Section 70.2 and Minn. R. 7007.0200
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 when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
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: 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 fabric filter 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 fabric 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

TABLE B: SUBMITTALS

05/07/02

Facility Name: Northern Castings Corp
Permit Number: 13700082 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Testing Frequency Plan	due 60 days after Performance Test for total particulate matter emissions. 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.	SV002

TABLE B: RECURRENT SUBMITTALS

05/07/02

Facility Name: Northern Castings Corp

Permit Number: 13700082 - 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 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX B – Insignificant Activities**Facility Name:** Northern Castings Corporation**Permit Number:** 13700082-001**Insignificant Activities and Applicable Requirements**

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Applicable Requirement
3(A)	Fuel use: space heaters fueled by, kerosene, natural gas, or propane. <ul style="list-style-type: none">• Ten space heaters fired with natural gas/propane,	Minn. R. 7011.0510/0515
3(G)	Emissions from a laboratory, as defined in the subpart. <ul style="list-style-type: none">• Metal testing laboratory	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">• Emergency generator• Bentonite storage bin• Air Makeup Unit• Holding Furnace	<ul style="list-style-type: none">• Minn. R. 7011.2300• Minn. R. 7011.0710/0715• Minn. R. 7011.0510/0515• Minn. R. 7011.0710/0715
3(J)	Fugitive Emissions from roads and parking lots. <ul style="list-style-type: none">• Unpaved access road	Minn. R. 7011.0150
3(K)	Infrequent use of spray paint equipment for routine housekeeping or plant upkeep activities not associated with primary production processes at the stationary source, such as spray painting of buildings, machinery, vehicles, and other supporting equipment. <ul style="list-style-type: none">• Miscellaneous spray painting is done for plant maintenance purposes	Minn. R. 7011.0710/0715

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13700082-001

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

1. General Information

1.1 Applicant and Stationary Source Location:

Owner and Operator Address and Phone Number	Facility Address (SIC Code: 3321)
Intermet Corporation 5445 Corporate Drive Suite 200 Troy, MI 48098-2683 Mr. Roger Rask General Manager (218) 263-8871	Northern Castings Corp. 555 West 25 th Street Hibbing, St. Louis County

1.2 Description of the facility

Northern Castings is a ductile iron foundry. The source consists of two electric induction furnaces, a holding furnace, pouring and cooling areas, a shakeout system, casting cleaning equipment, and a sand handling system.

1.3 Description of any changes allowed with this permit issuance

None.

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

None

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	Lead tpy	Total HAPs tpy
Total Facility Limited Potential Emissions	74.5	54.2	1.1	12.8	5.6	46.7	1.3	9.9
Total Facility Actual Emissions (1998)	6.12	20.79	0.01	0.09	0.02	19.43	0.18	NR*

*NR = Not Reported (HAPs not reported on the annual emission inventory)

Table 2. Total Facility and Permit Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		PM, PM ₁₀	SO ₂ , NO _x , VOC, CO
NAAR - NA			
Part 70 Permit Program		PM ₁₀	VOC, NO _x , HAPs. CO, SO ₂

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

2. Regulatory Overview of Facility

New Source Review

Unpermitted, the facility would be a potential major source under New Source Review – Prevention of Significant Deterioration (PSD, 40 CFR § 52.21), since unrestricted PM and PM₁₀ emissions exceed 100 tons per year. The facility has not actually exceeded these thresholds, and therefore can and chooses to accept synthetic minor limits to maintain the non-major source classification of the facility.

Part 70 Permit Program

Unpermitted, the facility would be a potential major source under Part 70, since unrestricted PM and PM₁₀ emissions exceed 100 tons per year. The facility has not actually exceeded these thresholds, and therefore can and chooses to accept synthetic minor limits at this time to maintain the non-major source classification of the facility.

New Source Performance Standards

There are no New Source Performance Standards that apply to this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

The facility is not a major source of HAPs. There are no promulgated NESHAPs applicable to this facility. No changes affecting the emissions of any listed HAP are being made at the facility.

Minnesota State Rules

Several State Standards of Performance apply to portions of this facility and are included in the permit. These include:

- Minn. R. 7011.0500 to 7011.0553 – New and Existing Indirect Heating Fossil Fuel Burning Equipment
- Minn. R. 7011.0600 to 7011.0625 – Direct Heating Fossil Fuel Burning Equipment
- Minn. R. 7011.0700 to 7011.0735 – Pre- and Post-1969 Industrial Process Equipment

Table 3. Regulatory Overview

	Applicable Regulations	Comments:
GP001	Title I Condition – Limit to avoid NSR and Part 70	Limit set on quantity of metal that may be melted. This inherently limits the quantity of product that may be produced, and the amount of finishing work done and the amount of sand used.
	Minn. R. 7017.2025	Production limits set as a result of performance testing. Limits set in letter dated 6/29/95.
GP002	Minn. R. 7007.0510/0515	Standards of Performance for Indirect Heating Equipment – applies to individual units
SV001, SV010	Minn. R. 7007.0610	Standards of Performance for Direct Heating Equipment – applies to individual units
	Title I Condition – Limit to avoid NSR	Operation of control equipment is required in order to avoid NSR.
SV002, SV003, SV004, SV011	Minn. R. 7011.0710/0715	Standards of Performance for Industrial Process Equipment – applies to individual units
	Title I Condition – Limit to avoid NSR	Operation of control equipment is required in order to avoid NSR.

3. Technical Information

3.1 Calculations

Metal Melting

Emissions for metal melting are calculated using AP-42 emission factors for electric induction furnaces for gray iron foundries. Unrestricted emissions (tpy) are based on equipment capacity and no control; hourly emissions are based on equipment capacity and control efficiency; limited emissions are based on the facility melt limit of 39000 tons per year and control efficiency.

Pouring/Casting/Cooling

Emissions for pouring, casting, and cooling are calculated using AP-42 emission factors for pouring and casting in gray iron foundries. Again, unrestricted emissions (tpy) are based on equipment capacity and no control; hourly emissions are based on equipment capacity and control efficiency; limited emissions are based on the facility melt limit of 39000 tons per year and control efficiency.

Grinding/Cleaning

Emissions for grinding/cleaning were calculated using AIRS emission factors for grinding/cleaning and casting finishing for gray iron foundries. Unrestricted emissions (tpy) are based on equipment capacity and no control; hourly emissions are based on equipment capacity and control efficiency; limited emissions are based on the facility melt limit of 39000 tons per year and control efficiency.

Shakeout

Shakeout emissions were calculated using AIRS emission factors for casting shakeout in gray iron foundries. Unrestricted emissions (tpy) are based on equipment capacity and no control; hourly emissions are based on equipment capacity and control efficiency; limited emissions are based on the facility melt limit of 39000 tons per year and control efficiency.

Indirect Heating Equipment

Emissions from indirect heating equipment were calculated using AP-42 emission factors for natural gas combustion and the rated heat input of the equipment. Limited emissions resulting from the facility melt limit of 39000 tons per year were not calculated. The worst case assumption was made that regardless of the amount of product produced, the heating equipment could still be run at full capacity.

Sand Handling

Emissions were calculated using the AP-42 emission factors for baghouse-controlled and scrubber-controlled sand handling at gray iron foundries. Hourly and unrestricted emissions are based on equipment capacity; limited emissions are based on the amount of sand used at the limited melt rate (calculated by the permittee).

HAP Emissions

HAP emissions were calculated by the Permittee, based on the “Total HAP Emission Factors for Preliminary Screening Analysis – Iron Foundries,” compiled by the American Foundrymen’s Society Air Quality Committee and MACT Task Force (10/08/01). The calculation is included with Attachment A. Emissions of Total HAPs can be calculated using this method, but not individual HAPs and not on a per-unit basis. Since none of the sources are subject to an applicable requirement for HAPs, the emissions need not be reported on a per-unit basis. However, the rules do require that potential emissions of each individual HAP be reported. Previous information (Modern Castings, October 1994, sometimes used as a source of emissions data for foundries) shows that the expected HAPs from a foundry using green sand binder are acrolein, benzene, formaldehyde, cyanide compounds, naphthalene, xylene, phenol, and toluene. As a worst case, one could assume that the 9.9 tons per year of total HAPs is comprised of any one of these pollutants, and the facility would still be classified as a non-major source. However, the reality is that a combination of these pollutants will comprise the 9.9 tons per year of total HAPs. The facility is not a major source of HAPs.

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. To achieve this objective, US EPA issued guidance (September 15, 1998, memorandum Periodic Monitoring Guidance for Title V Operating Permits Program, and April 30, 1999, guidance titled Periodic Monitoring Technical Reference Document) on periodic monitoring requirements for permitted sources.

In evaluating the monitoring included in the permit, the MPCA considered the following as per the above mentioned guidance documents:

- the likelihood of violating the applicable requirement;
- whether add-on controls are necessary to meet the emission limit;
- 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.

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

Table 4. Emission Units Subject to Periodic Monitoring

EU/ GP/ CE	Emission limit (basis)	Additional Monitoring	Discussion
GP001 units (melt furnaces)	39000 tons of metal melted per year (Title I limit)	Recordkeeping: Daily records of melt and monthly records of 12 month rolling sum	
GP002 (Makeup Air Units)	PM and opacity limits (MN Indirect Heating Equipment standard)	None	The PTE at design capacity is approximately 2% of the applicable PM limit. It is unlikely that the limit will be violated.
SV001, SV010	PM and opacity limits (MN Direct Heating Equipment standard)	Daily reading and recordkeeping of pressure drop	The calculated hourly controlled emissions of each furnace are approximately 50% of the applicable PM limit (see summary included in Attachment A). It is unlikely that the limit would be violated as long as the control equipment is properly operated and maintained.
SV002	PM and opacity limits (MN Industrial Process Equipment standard)	Stack test Daily reading and recordkeeping of pressure drop	Calculated potential hourly emissions based on AP-42 are not significantly less than the MN limit, therefore testing is being requested.

EU/ GP/ CE	Emission limit (basis)	Additional Monitoring	Discussion
SV003 SV004 SV011	PM and opacity limits (MN Industrial Process Equipment standard)	Daily reading and recordkeeping of pressure drop	<p>The calculated hourly controlled emissions of all units combined (at each stack) as a percentage of the applicable limit are as follows:</p> <p>SV003: 30% of limit</p> <p>SV004: 018%</p> <p>SV011: 56%</p> <p>It is unlikely that the limits would be violated as long as the control equipment is properly operated and maintained.</p>

3.3 Insignificant Activities

The facility has several operations that qualify as insignificant activities under Minn. Rules. These are included in Appendix B to the permit, with the applicable requirements.

4. Conclusion

Based on the information provided by Northern Castings, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in Air Emission Permit No. 13700082-001 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, Bob Beresford

Attachments: A. Calculations and PTE Summary
B. Facility Description and CD-01 Forms