

AIR EMISSION PERMIT NO. 07900017- 003

IS ISSUED TO

Le Sueur Incorporated

LE SUEUR INCORPORATED

1409 Vine Street

Le Sueur, Le Sueur County, MN 56058

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
Total Facility Operating Permit – Re-issuance	09/22/2005

This permit supersedes permit number 07900017-002 and 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: Federal; Pt 70/Limits to Avoid NSR

Issue Date: July 15, 2008

Expiration: July 15, 2013

All Title I Conditions do not expire.

Jeff J. Smith, Manager
Air Quality Permits Section
Industrial Division

For Brad Moore
Commissioner

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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:

Le Sueur Incorporated is an aluminum foundry. Emission sources include reverberatory and crucible furnaces used to melt the aluminum; equipment for pouring, casting, and cooling the molten aluminum using die casting, permanent mold, and sand mold technologies; core making machines; equipment for grinding, cleaning, shot-blasting, and finishing the castings; sand handling equipment; and plant heating equipment. Le Sueur Incorporated also has a thermoplastic injection molding operation on site. The thermoplastic injection molding is an insignificant activity.

The facility is a major source under the Part 70 permit program (40 CFR § 70.2). By virtue of federally enforceable operating conditions, the facility is a non major source under the federal Prevention of Significant Deterioration (PSD, 40 CFR § 52.21) program.

REISSUANCE DESCRIPTION:

Permit action 003 (PER 003) is a re-issuance for the total facility operating permit (PER 001) at Le Sueur Incorporated after PER 001 has expired. This permit authorizes the Permittee to raise the limit of the total quantity of aluminum that may be melted at the facility from 17,500 tons per year (tpy) to 37,000 tpy. The Permittee is also allowed to replace the ward iron scrubber (CE 010) with a fabric filter (CE 017). After successful installation of CE 017 the limit of the total quantity of aluminum that may be melted at the facility will then raise to 40,000 tpy. The Permittee is allowed to add five new furnaces (EU 209 to EU 213) to group 1 (GP001) in the future. Currently, Striko Dynarad Furnace no. 14 (EU 172) is the furnace with the maximum potential throughput at Le Sueur Incorporated. Each furnace added to GP001 is allowed to have a maximum potential throughput lower than or equal to EU 172. Also, Le Sueur Incorporated agrees to operate the Pulse Jet Fabric filter (CE 015) at pressure differential range of 0.5 to 6 inches (instead of 2.0 to 4.0 inches).

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

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
This permit establishes limits on the facility to keep it a minor source under New Source Review. The Permittee cannot make any change at the source that would make the source a major source under New Source Review unless and until a major amendment has been issued. This includes changes that might otherwise qualify as insignificant modifications and minor or moderate amendments.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
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
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, subps. 14 and 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
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	Minn. R. 7017.2030, subp. 1-4 and Minn. R. 7017.2035, subp. 1-2
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

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
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.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0100; Minn. R. 7007.0800, subp.2; Minn. R. 7011.0150; Minn. R. 7009.0020.
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 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. 7019.3010
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**A-3**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 001 Furnaces

Associated Items:

- EU 001 Reverberatory Furnace (2017)
- EU 002 Reverberatory Furnace (2114)
- EU 003 Reverberatory Furnace (2115)
- EU 004 Reverberatory Furnace (2116)
- EU 005 Reverberatory Furnace (2209)
- EU 006 Reverberatory Furnace (2224)
- EU 007 Reverberatory Furnace (6900)
- EU 008 Wet Bath Furnace (6905)
- EU 010 Wet Bath Furnace (6940)
- EU 011 Reverberatory Furnace (6945)
- EU 012 Wet Bath Furnace (6950)
- EU 013 Wet Bath Furnace (6955)
- EU 014 Wet Bath Furnace (6960)
- EU 015 Reverberatory Dry Hearth Furnace (7010)
- EU 016 Reverberatory Dry Hearth Furnace (7078)
- EU 017 Wet Bath Furnace (7500)
- EU 018 Wet Bath Furnace (7501)
- EU 019 Reverberatory Furnace (7503)
- EU 020 Reverberatory Furnace (7504)
- EU 021 Reverberatory Furnace (7505)
- EU 023 Wet Bath Furnace (7507)
- EU 024 Reverberatory Furnace (7511)
- EU 025 Reverberatory Dry Hearth Furnace (7566)
- EU 026 Reverberatory Dry Hearth Furnace (7567)
- EU 027 Reverberatory Dry Hearth Furnace (7586)
- EU 028 Electric Furnace (6915)
- EU 029 Electric Furnace (6925)
- EU 118 Natural Gas Reverberatory Furnace (7587)
- EU 121 Electric Crucible Furnace (7508)
- EU 171 Furnace #4 Dynarad Crucible (6930)
- EU 172 Furnace #14 Striko Dynarad (6454)
- EU 209 Additional Future Furnace #1
- EU 210 Additional Future Furnace #2
- EU 211 Additional Future Furnace #3
- EU 212 Additional Future Furnace #4
- EU 213 Additional Future Furnace #5

What to do	Why to do it
Material Usage: less than or equal to 37,000 tons/year using 12-month Rolling Sum of aluminum melted in all furnaces combined (includes internally generated scrap that is remelted).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

The melting limit of less than or equal to 37,000 tons/year will no longer apply starting on the 12th month following the installation of a fabric filter (CE 017). See below for the new melting limit after the 12th month following CE 017 installation. The rolling sum of the material usage is the aluminum melted in all furnaces combined (includes internally generated scrap that is re-melted).	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
After the 12th month following the fabric filter (CE 017) installation: Material Usage: less than or equal to 40,000 tons/year using 12-month Rolling Sum	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
PM/PM-10 Precap: If the Permittee replaces any existing Furnaces, modifies the existing Furnaces, or adds up to five new Furnaces, such equipment is subject to all the requirements of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emissions change if the change will be subject to new applicable requirements or requires revision to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Monthly Recordkeeping - By the 15th day of each month, the Permittee shall calculate and record a. The total quantity of aluminum melted during the previous month (including internally generated scrap that is remelted). b. The 12-month rolling sum of aluminum melted during the previous 12 months, by summing the 12 previous monthly aluminum melt quantities.	Minn. R. 7007.0800, subp. 4 and subp. 5
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit.	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. This limit applies individually to each unit.	Minn. R. 7011.0610, subp. 1(A)(2)
Five new furnaces to be added in the future (EU 209, EU 210, EU 211, EU 212, and EU 213) shall be restricted to have the maximum capacity less than or equal to the capacity of Striko Dynarad Furnace #14 (EU 172).	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.

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

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Subject Item: GP 002 Pouring/Casting/Cooling

Associated Items:

- EU 030 Die Cast Machine (2001)
- EU 031 Die Cast Machine (2006)
- EU 032 Die Cast Machine (2008)
- EU 033 Die Cast Machine (2009)
- EU 034 Die Cast Machine (2010)
- EU 035 Die Cast Machine (2011)
- EU 036 Die Cast Machine (2012)
- EU 037 Die Cast Machine (2174)
- EU 038 Die Cast Machine (2210)
- EU 039 Die Cast Machine (2227)
- EU 040 Die Cast Machine (2263)
- EU 041 Die Cast Machine (2298)
- EU 042 Tilt Machine (6500)
- EU 043 Tilt Machine (6505)
- EU 044 Tilt Machine (6510)
- EU 045 Tilt Machine (6520)
- EU 046 Tilt Machine (6530)
- EU 047 Tilt Machine (6545)
- EU 049 Tilt Machine (6555)
- EU 051 Tilt Machine (6565)
- EU 052 Tilt Machine (6570)
- EU 053 Tilt Machine (6575)
- EU 055 Tilt Machine (6996)
- EU 056 Tilt Machine (7046)
- EU 057 Tilt Machine (7076)
- EU 058 Tilt Machine (7085)
- EU 059 Tilt Machine (7086)
- EU 060 3-Way Machine (6540)
- EU 061 3-Way Machine (7045)
- EU 062 Low Pressure Molding Machine (7018)
- EU 063 Low Pressure Molding Machine (7023)
- EU 064 Low Pressure Molding Machine (7089)
- EU 065 Sand Molding Machine (7549) Casting Line
- EU 066 Sand Molding Machine (7576) Casting Line
- EU 069 Pinlift Drag and Cope #1 Casting Line (7530,7531)
- EU 122 Die Cast Machine (2003)
- EU 123 Die Cast Machine (2004)
- EU 124 Die Cast Machine (2007)
- EU 125 Die Cast Machine (2300)

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Associated Items: EU 126 Die Cast Machine (2307)
 EU 128 Tilt Machine (6515)
 EU 129 Tilt Machine (6525)
 EU 130 Tilt Machine (6535)
 EU 131 Tilt Machine (6585)
 EU 133 Tilt Machine (6595)
 EU 134 Tilt Machine (7048)
 EU 135 Pouring and Cooling
 EU 142 Sand Molding Machine (7534) Casting Line
 EU 145 Sand Squeeze Box Molding Machine (7532) Casting Line
 EU 175 Tilt Machine (7104)
 EU 176 Tilt Machine (7109)
 EU 184 Permanent Mold Machine Hall 3HSX (6491),(replaced EU 132)
 EU 185 Permanent Mold Machine Hall 3HSX (6492), (replaced EU 048)
 EU 186 Permanent Mold Machine Hall 3HSX (6493), (replaced EU 054)
 EU 187 Permanent Mold Machine Hall 3HSX (6494)
 EU 196 Die Cast Machine (2365)
 EU 198 Sand Mold Machine Pinlift Casting Line (7697, 7699), (replaced EU 143 and 144)
 EU 201 Mold Machine 3-Way (4546)
 EU 202 Mold Machine Hall Machine (6427)
 EU 203 Mold Machine Hall Machine (6428)
 EU 204 Mold Machine Hall Machine(6429)
 EU 208 Low Pressure Molding Machine (6523)

What to do	Why to do it
PM/PM-10 Precap: If the Permittee replaces any existing Pouring/Casting/Cooling equipment that is directly related to the melting limit, adds new equipment, or modifies the existing Pouring/Casting/Cooling equipment, such equipment is subject to the permit metal melting limit listed in GP 001 as well as the requirements of GP 002. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emissions change if the change will be subject to new applicable requirements or requires revision to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit.	Minn. R. 7011.0710, subp. 1(A) (units in operation before July 9, 1969) OR Minn. R. 7011.0715, subp. 1(A) (units which were not in operation before July 9, 1969)
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.	Minn. R. 7011.0710, subp. 1(B) (units in operation before July 9, 1969)
Opacity: less than or equal to 20 percent opacity This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(B) (units not in operation before July 9, 1969)

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 003 Indirect Heating Equipment

Associated Items: EU 113 Plant Heater (6360)
 EU 117 Air Makeup Heater (8035)
 EU 153 Natural Gas Air Make Up Heater (7571)
 EU 154 Natural Gas Air Make Up Heater (8363)
 EU 155 Natural Gas Air Make Up Heater (8364)
 EU 156 Natural Gas Air Make Up Heater (2181)
 EU 157 Natural Gas Air Make Up Heater (2182)
 EU 158 Natural Gas Air Make Up Heater (2186)
 EU 159 Natural Gas Air Make Up Heater (2223)
 EU 160 Natural Gas Air Make Up Heater (7028)
 EU 190 Heater Air Make-up Gas Unit #1 (7691)
 EU 191 Heater Air Make-up Gas Unit #2 (7692)
 EU 192 Heater Air Make-up Gas Unit #3 (7693)
 EU 193 Heater Air Make-up Unit RUPP #1 (6464)
 EU 194 Heater Air Make-up Unit RUPP #2 (6465)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.60 lbs/million Btu heat input This limit applies individually to each unit. Note: Each of the units listed has potential emissions of 0.007 lb/million Btu heat input, based on equipment design.	Minn. R. 7011.0510, subp. 1 (units in operation prior to January 31, 1977)
Total Particulate Matter: less than or equal to 0.40 lbs/million Btu heat input This limit applies individually to each unit. Note: Each of the units listed has potential emissions of 0.007 lb/million Btu heat input, based on equipment design.	Minn. R. 7011.0515, subp. 1 (units not in operation prior to January 31, 1977)
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.	Minn. R. 7011.0510, subp. 2 OR Minn. R. 7011.0515, subp. 2
Fuel type: Natural gas or propane only.	Minn. R. 7005.0100, subp. 35a

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 004 Grinding/Cleaning Equipment

Associated Items: CE 002 Wet Scrubber - High Efficiency
 CE 004 Cartridge Dust Collector
 CE 011 Centrifugal Collector - High Efficiency
 EU 086 Grinder (2305)
 EU 087 Downdraft Table (2309)
 EU 090 Grinder (7580)
 EU 091 Grinder (7585)
 EU 092 Grinder (8300)
 EU 093 Grinder (8301)
 EU 094 Grinder (8303)
 EU 195 Grinder Double Back Stand #3 (8302)

What to do	Why to do it
PM/PM-10 Precap (part 1 of 3): If the Permittee replaces any existing Grinding/Cleaning equipment, adds new grinding/cleaning equipment, or modifies the existing grinding/cleaning equipment, such equipment is subject to the requirements of GP 004 as well as the metal melting limit of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
PM/PM-10 Precap (part 2 of 3): The Permittee shall vent emissions from all applicable grinding/cleaning equipment (other than those that qualify as insignificant under Minn. R. 7007.1300 subp. 2) as follows: 1. All emissions from existing, modified, or new equipment must be vented to control equipment. 2. Changes or modifications to existing emission equipment must be vented to the same control equipment or control equipment in this group that has control efficiency equal to or greater than the previous control equipment. 3. Newly added emission equipment must be vented to control equipment that has control efficiency equal to or greater than the most efficient control equipment in this group.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
PM/PM-10 Precap (part 3 of 3): The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emissions change if the change will be subject to new applicable requirements or requires revision to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(B)
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. (See Subject Items CE002, CE004, and CE011 for specific operating conditions for the control equipment.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 005 Blasting Equipment

Associated Items: CE 010 Wet Scrubber - High Efficiency

CE 013 Cartridge Dust Collector

CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 017 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 082 Goff Shotblast Unit (2013)

EU 095 Tumbleblast (8328)

EU 177 Jet Blast Wheelabrator (8392)

What to do	Why to do it
PM/PM-10 PreCap (part 1 of 3): If the Permittee replaces any existing Blasting equipment, adds new blasting equipment, or modifies the existing blasting equipment, such equipment is subject to the requirements of GP 005 as well as the metal melting limit of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
PM/PM-10 Precap (part 2 of 3): The Permittee shall vent emissions from all applicable blasting equipments including existing, modified, or new blasting equipments as follows: 1. All emissions from existing, modified, or new equipment must be vented to control equipment. 2. Changes or modifications to existing emission equipment must be vented to the same control equipment or control equipment in this group that has control efficiency equal to or greater than the previous control equipment. 3. Newly added emission equipment must be vented to control equipment that has control efficiency equal to or greater than the most efficient control equipment in this group.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
PM/PM-10 Precap (part 3 of 3): The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emissions change if the change will be subject to new applicable requirements or requires revision to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit.	Minn. R. 7011.0710, subp. 1(A) (units which were in operation before July 9, 1969) OR Minn. R. 7011.0715, subp. 1(A) (units not in operation before July 9, 1969)
Opacity: less than or equal to 20 percent opacity This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(B) (units not in operation before July 9, 1969)
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.	Minn. R. 7011.0710, subp. 1(B) (units in operation before July 9, 1969)
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. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff. (See Subject Items CE 010, CE 013, CE 016 and CE 017 for specific operating conditions for the control equipment.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21; 40 CFR Section 64.7(b); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7017.0200
CONTROL REQUIREMENTS: See Subject Items CE 013, CE 016, CE 017, and CE 010 for specific control equipment operating requirements.	hdr

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 006 Core Machines

Associated Items: EU 070 Laempe Core Machine (7663)
 EU 074 Laempe Core Machine (8015)
 EU 076 Core Machine (8024)
 EU 077 Laempe Core Machine (8036)
 EU 078 Core Machine (8037)
 EU 079 Core Machine (8044)
 EU 080 Laempe Core Machine (8045)
 EU 081 Core Machine (7080)
 EU 136 Shell Core Machine (8005)
 EU 139 Shell Core Machine (8008)
 EU 140 Shell Core Machine (8009)
 EU 178 Core Machine Cold Box Laempe LB25 (8062)
 EU 188 Core U-180 Shell Core Machine (8048)
 EU 189 Core Shalco U-900 Shell Core Machine (8050)

What to do	Why to do it
PM/PM-10 PreCap: If the Permittee replaces any existing Core machines, adds new core machines, or modifies the existing core machines, such equipment is subject to the requirements of GP 006 as well as the metal melting limit of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emission change if the change will be subject to new applicable requirements or requires revisions to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit. All units exhaust inside the building except only the Laempe Core Machines which exhausts outside of the building.	Minn. R. 7011.0710, subp. 1(A) (units which were in operation before July 9, 1969) OR Minn. R. 7011.0715, subp. 1(A) (units not in operation before July 9, 1969)
Opacity: less than or equal to 20 percent opacity This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(B) (units not in operation before July 9, 1969)
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.	Minn. R. 7011.0710, subp. 1(B) (units in operation before July 9, 1969)

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-11**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: GP 007 Knockout/shakeout

Associated Items: EU 109 Pinlift Shaker (7541)
 EU 110 Core Knockout Machine (8311)
 EU 111 Core Knockout Machine (8366)
 EU 112 Core Knockout Machine (8367)
 EU 147 Shaker (7540)
 EU 150 Core Knockout (8312)
 EU 151 Core Knockout (8313)
 EU 152 Core Knockout (8370)
 EU 169 Shake out (7569)
 EU 205 Core Knockout Machine (6440)
 EU 206 Core Knockout Machine (7036)
 EU 207 Core Knockout Machine (7103)

What to do	Why to do it
PM/PM-10 PreCap: If the Permittee replaces any existing knockout/shakeout, adds new knockout/shakeout, or modifies the existing knockout/shakeout, such equipment is subject to the requirements of GP 007 as well as the metal melting limit of GP 001. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat the calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment is needed regardless of the emission change if the change will be subject to new applicable requirements or requires revisions to the limits or monitoring and recordkeeping in this permit. Changes to existing monitoring, recordkeeping, or reporting requirements require a major amendment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000.
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit. Each unit exhausts inside the building.	Minn. R. 7011.0710, subp. 1(A) (units which were in operation before July 9, 1969) OR Minn. R. 7011.0715, subp. 1(A) (units not in operation before July 9, 1969)
Opacity: less than or equal to 20 percent opacity This limit applies individually to each unit (all are exhausted inside the building).	Minn. R. 7011.0715, subp. 1(B) (units not in operation before July 9, 1969)
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 (all are exhausted inside the building).	Minn. R. 7011.0710, subp. 1(B) (units in operation before July 9, 1969)

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

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Subject Item: GP 008 Sand silos - Controlled

Associated Items: CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 105 Sand Silo-Coldbox Core Sand (7664)

EU 106 Sand Silo-Mold Sand (7665)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 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. This limit applies individually to each unit.	Minn. R. 7011.0710, subp. 1(A) (units which were in operation before July 9, 1969)
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.	Minn. R. 7011.0710, subp. 1(B) (units in operation before July 9, 1969)
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. (See Subject Items CE015 for specific operating conditions for the control equipment.)	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14

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

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Subject Item: GP 009 Sand silos and handling - Uncontrolled or Credit not taken

Associated Items: EU 104 Sand Transport North Building (7091)
EU 146 Sand Transfer-Core Room Coldbox Sand and Mold Sand
EU 174 Sand Silo Reclamation (8056)
EU 200 Sand Silo North of North Building (8073)

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.30 grains/dry standard cubic foot unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. this limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(A) (units not in operation before July 9, 1969)
Opacity: less than or equal to 20 percent opacity. This limit applies individually to each unit.	Minn. R. 7011.0715, subp. 1(B)

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

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Subject Item: EU 107 Mullor (7543)

Associated Items: CE 012 Wet Scrubber - High Efficiency
SV 079 Stack 138 Mullor (7543)

What to do	Why to do it
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. At maximum capacity, the controlled potential to emit is less than the equivalent emission limit.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Total Particulate Matter: greater than or equal to 90 percent control efficiency . See Subject Item CE012 for specific control equipment requirements.	Minn. R. 7011.0715, subp. 1(A) (control required to meet limit)

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

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Subject Item: EU 108 Mullor Barrel Screen (7544)

Associated Items: SV 085 Stack 145 Mullor Barrel Screen (7544)

What to do	Why to do it
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. 7011.0710, subp. 1(A)
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. 7011.0710, subp. 1(B)

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

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 002 Wet Scrubber - High Efficiency

Associated Items: EU 086 Grinder (2305)
 EU 087 Downdraft Table (2309)
 EU 195 Grinder Double Back Stand #3 (8302)
 GP 004 Grinding/Cleaning Equipment

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
If the Permittee replaces any existing wet scrubber, adds new wet scrubber, or modifies the wet scrubber listed in GP 004, such equipment is subject to all of the requirements of GP 004. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 72 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 72 percent	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 6 inches of water column and less than or equal to 9 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The 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
MONITORING AND RECORDKEEPING	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 and recorded was within the ranges specified in this permit.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the scrubber and initiate corrective action as soon as possible (within 24 hours) if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the scrubber or any of its components are found during the inspections to need repair. 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
Initial Hood Certification and Evaluation: The control device hood shall conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0072, subps. 2 and 3. The Permittee shall maintain a copy of the evaluation and certification on site.	Minn. R. 7007.0800, subps. 4, 5, and 14
Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method as required by Minn. R. 7011.0072, subp. 4. The Permittee shall maintain a copy of the annual evaluation on site.	Minn. R. 7007.0800, subps. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-17**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 004 Cartridge Dust Collector

Associated Items: EU 090 Grinder (7580)
 EU 091 Grinder (7585)
 EU 092 Grinder (8300)
 EU 093 Grinder (8301)
 GP 004 Grinding/Cleaning Equipment

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
If the Permittee replaces any existing cartridge dust collector, adds new cartridge dust collector, or modifies cartridge dust collector listed in GP 004, such equipment is subject to all of the requirements of GP 004. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 79.2 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 79.2 percent	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 4 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The 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
MONITORING AND RECORDKEEPING	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.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the filter and initiate corrective action as soon as possible (within 24 hours) if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the filter or any of its components are found during the inspections to need repair. 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
Initial Hood Certification and Evaluation: The control device hood shall conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0072, subps. 2 and 3. The Permittee shall maintain a copy of the evaluation and certification on site.	Minn. R. 7007.0800, subps. 4, 5, and 14
Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method as required by Minn. R. 7011.0072, subp. 4. The Permittee shall maintain a copy of the annual evaluation on site.	Minn. R. 7007.0800, subps. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-18**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 010 Wet Scrubber - High Efficiency

Associated Items: EU 177 Jet Blast Wheelabrator (8392)

GP 005 Blasting Equipment

What to do	Why to do it
CE 010 will be replaced by CE 017	hdr
Upon installation of fabric filter (CE 017) and removal of the Ward Iron Scrubber (CE 010), the Permittee shall no longer be required to comply with the requirements listed below.	Minn. R. 7007.0800, subps. 4, 5, and 14
EMISSION AND OPERATING LIMITS	hdr
The Permittee shall maintain and operate the scrubber (CE 010) at all times that any emission unit controlled by the equipment (EU 177) is in operation. The Permittee shall operate and maintain the control equipment 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. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid major source classification under 40 CFR Sections 52.21 and 64.7(b); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7017.0200
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 90 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 90 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Water flow rate: greater than or equal to 21 gallons/minute, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the water flow rate 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
Pressure Drop: greater than or equal to 5 inches of water column and less than or equal to 7 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop once every 24 hours when in operation. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING AND RECORDKEEPING	hdr
Daily Inspections: The Permittee shall do the following, once every 24 hours, when the jet blast wheelabrator is in operation: 1). Read and record the scrubber liquid flow rate; 2). Read and record the water supply pressure; and 3). Read and record the gas pressure drop across the scrubber.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of Pressure Drop, Water Flow Rate, and Water Supply Pressure: The Permittee shall record the time and date of each pressure drop reading, water flow rate reading, and water supply pressure reading, and whether or not the observed value was within the range specified in this permit. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 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.	40 CFR Section 64.3; Minn. R. 7017.0200; 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 water supply pressure is outside the required operating range; or - the recorded water flow rate is outside the required operating range; or - the recorded pressure drop 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 and/or water flow rate and/or water supply pressure 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 for the filter.	40 CFR Section 64.7(d); Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-19**

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop, water flow rate, and water supply pressure as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored scrubber is in operation.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall calibrate the gauges at least once every calendar year and shall maintain a written record of any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-20**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 011 Centrifugal Collector - High Efficiency

Associated Items: EU 094 Grinder (8303)

GP 004 Grinding/Cleaning Equipment

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
If the Permittee replaces any existing centrifugal collector, adds new centrifugal collector, or modifies centrifugal collector listed in GP 004, such equipment is subject to all of the requirements of GP 004. Prior to making such a change, the Permittee shall apply for and obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 68 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 68 percent	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 4 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The 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
MONITORING AND RECORDKEEPING	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.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the control equipment and initiate corrective action as soon as possible (within 24 hours) if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the equipment or any of its components are found during the inspections to need repair. 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
Initial Hood Certification and Evaluation: The control device hood shall conform to the requirements listed in Minn. R. 7011.0070, subp. 1, and the Permittee shall certify this as specified in Minn. R. 7011.0072, subps. 2 and 3. The Permittee shall maintain a copy of the evaluation and certification on site.	Minn. R. 7007.0800, subps. 4, 5, and 14
Annual Hood Evaluation: The Permittee shall measure and record at least once every 12 months the fan rotation speed, fan power draw, or face velocity of each hood, or other comparable air flow indication method as required by Minn. R. 7011.0072, subp. 4. The Permittee shall maintain a copy of the annual evaluation on site.	Minn. R. 7007.0800, subps. 4, 5, and 14

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-21**

07/15/08

Facility Name: Le Sueur Inc

Permit Number: 07900017 - 003

Subject Item: CE 012 Wet Scrubber - High Efficiency**Associated Items:** EU 107 Mullor (7543)

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 90 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and capture system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 90 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Water flow rate: greater than or equal to 4 gallons/minute , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the water flow rate 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
Pressure Drop: greater than or equal to 7 inches of water column and less than or equal to 9 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The 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
MONITORING AND RECORDKEEPING	hdr
Recordkeeping of Pressure Drop and Water Flow Rate. The Permittee shall record the time and date of each pressure drop reading and water flow rate reading and whether or not the recorded pressure drop and recorded water flow rate were within the ranges specified in this permit.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the scrubber and initiate corrective action as soon as possible (within 24 hours) 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. 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

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-22**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 013 Cartridge Dust Collector

Associated Items: EU 082 Goff Shotblast Unit (2013)
 GP 005 Blasting Equipment

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent	Title I Condition: Limit taken to avoid classification as a major source 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 3 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The 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
MONITORING AND RECORDKEEPING	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.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the filter and initiate corrective action as soon as possible (within 24 hours) if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the filter or any of its components are found during the inspections to need repair. 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

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-23**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 015 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 105 Sand Silo-Coldbox Core Sand (7664)

EU 106 Sand Silo-Mold Sand (7665)

GP 008 Sand silos - Controlled

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
The Permittee shall maintain and operate the control equipment at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) 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; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent	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 0.5 inches of water column and less than or equal to 6 inches of water column , unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop when silo filling is in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING AND RECORDKEEPING	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.	Minn. R. 7007.0800, subp. 4, 5 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: The Permittee shall follow the O & M Plan for the control equipment and initiate corrective action as soon as possible (within 24 hours) if any of the following occur: - the recorded pressure drop is outside the required operating range; or - the equipment or any of its components are found during the inspections to need repair. 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

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-24**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 095 Tumbleblast (8328)

GP 005 Blasting Equipment

What to do	Why to do it
The Permittee shall maintain and operate the fabric filter (CE 016) at all times that any emission unit controlled by the equipment (EU 095) is in operation. The Permittee shall operate and maintain the control equipment 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. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid major source classification under 40 CFR Sections 52.21 and 64.7(b); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7017.0200
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: according to manufacturer's specification, unless a new range is set pursuant to Minn. R. 7017.0205, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop once every 24 hours when the tumbleblast is in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING AND RECORDKEEPING	hdr
Daily Inspections: The Permittee shall do the following, once every 24 hours, when the tumbleblast is in operation: 1). Inspect the fabric filter stack (SV 114) for any visible emissions during daylight hours, except during inclement weather. 2). During inclement weather, read and record the pressure drop across the fabric filter.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of Visible Emissions and Pressure Drop: The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 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.	40 CFR Section 64.3; Minn. R. 7017.0200; 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: - visible emissions are observed; or - 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, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	40 CFR Section 64.7(d); Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 and 14
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.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall calibrate the pressure gauge at least once every calendar year and shall maintain a written record of any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200
Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-25**

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

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

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-26**

07/15/08

Facility Name: Le Sueur Inc
 Permit Number: 07900017 - 003

Subject Item: CE 017 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 177 Jet Blast Wheelabrator (8392)

GP 005 Blasting Equipment

What to do	Why to do it
CE 017 will replace CE 010.	hdr
Upon installation of fabric filter (CE 017) and removal of the Ward Iron Scrubber (CE 010), the Permittee shall comply with the requirements listed below.	Minn. R. 7007.0800, subps. 4, 5 and 14
EMISSION AND OPERATING LIMITS	hdr
The Permittee shall maintain and operate the control equipment (CE 017) at all times that any emission unit controlled by the equipment (including but not limited to the associated items specifically listed above) is in operation. The Permittee shall operate and maintain the control equipment 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. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid major source classification under 40 CFR Sections 52.21 and 64.7(b); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2 and 14; Minn. R. 7017.0200
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment and collection system such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
Pressure Drop: according to manufacturer's specification, unless a new range is set pursuant to Minn. R. 7017.0205, subp. 3, based on the values recorded during the most recent MPCA approved performance test where compliance was demonstrated. The Permittee shall record the pressure drop when the Jet Blast is in operation.	Title I Condition: To avoid major source classification under 40 CFR Section 52.21 and Minn. R. 7007.3000
MONITORING AND RECORDKEEPING	hdr
Daily Inspections: The Permittee shall do the following, once every 24 hours, when the jet blast wheelabrator is in operation: 1). Inspect the fabric filter stack (SV 026) for any visible emissions during daylight hours, except during inclement weather. 2). During inclement weather, read and record the pressure drop across the fabric filter.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200
Recordkeeping of Visible Emissions and Pressure Drop: The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit. Recorded values outside the range specified in this permit are considered Deviations as defined by Minn. R. 7007.0100, subp. 8a.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14; 40 CFR Section 64.3; Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 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.	40 CFR Section 64.3; Minn. R. 7017.0200; 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: - visible emissions are observed; or - 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, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	40 CFR Section 64.7(d); Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4, 5 and 14
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.	40 CFR Section 64.7(b); Minn. R. 7017.0200
The Permittee shall calibrate the pressure gauge at least once every calendar year and shall maintain a written record of any action resulting from the calibration.	40 CFR Section 64.3; Minn. R. 7017.0200

TABLE A: LIMITS AND OTHER REQUIREMENTS**A-27**

07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

Documentation of Need for Improved Monitoring: If the Permittee fails to achieve compliance with an emission limitation or standard for which the monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing pressure drop range, the Permittee shall promptly notify the MPCA and, if necessary, submit a permit amendment application to address the necessary monitoring change.	40 CFR Section 64.7(e); Minn. R. 7017.0200
As required by 40 CFR Section 64.9(a)(2), for the Semi-Annual Deviations Report listed in Table B of this permit and/or the Notification of Deviations Endangering Human Health and the Environment listed earlier in Table A of this permit, as applicable, the Permittee shall include the following related to the monitoring identified as required by 40 CFR pt. 64: 1) Summary information on the number, duration, and cause of excursions or exceedances, as applicable, and the corrective action taken; and 2) Summary information on the number, duration, and cause for monitor downtime incidents.	40 CFR Section 64.9(a)(2); Minn. R. 7017.0200
The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, and other supporting information required to be maintained. The Permittee may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements.	40 CFR Section 64.9(b); Minn. R. 7017.0200

TABLE B: SUBMITTALS**B-1** 07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

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

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

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

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

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.

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

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

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

Send any application for a permit or permit amendment to:

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**B-2** 07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of CE 017 Fabric Filter.	CE017
Notification of the date of Equipment Removal/Dismantlement	due 15 days after Equipment Removal and/or Dismantlement of CE 010 Wet Scrubber.	CE010

TABLE B: RECURRENT SUBMITTALS**B-3** 07/15/08

Facility Name: Le Sueur Inc
Permit Number: 07900017 - 003

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 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, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

APPENDIX I

Facility Name: Le Sueur Inc
Permit Number: 07900017-003

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">Facility has natural gas/propane fired space heaters. These heaters are not connected to piping or ducting to distribute the heat.	Minn. R. 7011.0510/0515
3(H)	Miscellaneous: 4. brazing, soldering or welding equipment; <ul style="list-style-type: none">Welding machines	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">Four rooftop HVAC units, each 0.45 MMBtu/hour, each has a PTE less than the above thresholds (EU161, EU162, EU163, EU164)Make-up air heater, 2.0 MMBtu/hr, PTE is less than above thresholds (EU165)Three fuel fired aging/stress relief ovens, one is 1.0 MMBtu/hr, the others are 0.5 MMBtu/hr each. Each has PTE less than the above thresholds (EU166, EU167, EU168)Three electric aging/stress relief ovens, each has PTE less than the above thresholds (EU114, EU115, EU116)Four individual units used for knockout/shakeout of molds and/or cores, each has a PTE less than the above thresholds (EU109, EU110, EU111, EU112)A new central vacuum systemCrusher Sand Reclamation (EU 173, Facility ID 8054) has potential emissions less than 2,000 lbs/year for PM/PM-10Thermoplastic injection molding operation. Potential emissions from each machine are less than 2,000 lbs/yr of VOC and less than 2,000 lbs/yr of PM/PM-10.	Minn. R. 7011.0510/0515 Minn. R. 7011.0510/0515 Minn. R. 7011.0610 Minn. R. 7011.0710/0715 Minn. R. 7011.0710/0715 Minn. R. 7011.0710/0715 Minn. R. 7011.0710/0715 Minn. R. 7011.0710/0715

<p>Minn. R. 7007.1300, subpart</p>	<p align="center">Rule Description of the Activity</p> <ul style="list-style-type: none"> Plastic pad printing. Potential VOC emissions are less than 2,000 lbs/yr with actual emissions are below all of the listed thresholds and actual use is less than 100 gallons/year. 	<p align="center">Applicable Requirement</p> <p>Minn. R. 7011.0710/0715</p>
<p>4</p>	<p>A. Potential emissions of 5.7 pounds per hour of carbon monoxide or actual emissions of two tons per year of carbon monoxide;</p> <p>B. Potential emissions of 2.28 pounds per hour or actual emissions of one ton per year for particulate matter, particulate matter less than ten microns, nitrogen oxide, sulfur dioxide, and VOCs;</p> <p>C. (2) Combined HAP actual emissions of one ton per year unless the emissions unit emits one or more of the following HAPs: carbon tetrachloride; 1,2-dibromo-3-chloropropane; ethylene dibromide; hexachlorobenzene; polycyclic organic matter; antimony compounds; arsenic compounds, including inorganic arsine; cadmium compounds; chromium compounds; lead compounds; manganese compounds; mercury compounds; nickel compounds; selenium compounds; 2,3,7,8-tetrachlorodibenzo-p-dioxin; or di-benzofuran. If the emission unit emits one or more of the HAPs listed in this sub-item, the emissions unit is not an insignificant activity under this sub-item.</p>	
<p>Minn. R. 7008.4110, subpart</p> <p>2</p>	<p align="center">Rule Description of the Activity</p> <p>Emissions from equipment venting PM or PM10 inside a building, for example: buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning equipment, must be:</p> <p>A. Filtered through an air cleaning system; and</p> <p>B. Vented inside of the building 100 percent of the time.</p> <ul style="list-style-type: none"> Six grinders (EU 098, EU 100, 8816, 8817, 8828, 8829, 8936 and 8858) and one cutoff saw (EU 097, Facility ID 8814) vent PM/PM10 emissions through a baghouse (CE 009), which is exhausted inside the building 100% of the time. 	<p align="center">Applicable Requirement</p> <p>Minn. R. 7011.0710/0715</p>

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 07900017-003

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

1. General Information:

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 3365)
1409 Vine Street P O Box 149 Le Sueur, MN 56058-0149	1409 Vine Street Le Sueur Le Sueur County
Contact: Mike Horton Phone: (507) 665-6204, ext. 342	

1.2. Description of the Permit Action:

Le Sueur Incorporated (Le Sueur) is an aluminum foundry. Emission sources include reverberatory and crucible furnaces used to melt the aluminum; equipment for pouring, casting, and cooling the molten aluminum using die casting, permanent mold, and sand mold technologies; core making machines; equipment for grinding, cleaning, shot-blasting, and finishing the castings; sand handling equipment; and plant heating equipment. Le Sueur also has a thermoplastic injection molding operation on site, which is an insignificant activity under Minn. R. 7007.1300, subp. 3(I).

This permit is a Part 70 re-issuance permit. The Permittee is taking limits to avoid classification as a major source with respect to New Source Review (NSR) / Prevention of Significant Deterioration (PSD) regulations. The emission changes resulting from this permit action do not exceed the major source PSD levels. Therefore, under NSR/PSD, Le Sueur is not a major source, but qualifies as a synthetic minor source for PM and PM-10, and minor for Nitrogen Oxides (NO_x), Sulfur Dioxide (SO₂), Carbon Monoxide (CO) and Volatile Organic Compounds (VOCs).

1.3. Description of any Changes Allowed with this Permit Issuance:

This permit authorizes the Permittee to raise the limit of the total quantity of aluminum that may be melted at the facility from 17,500 tons per year to 37,000 tons per year while operating with the Ward Iron Scrubber (CE 010). Le Sueur has completed PM and PM-10 emission testing for two furnaces (EU 023 and EU 172) on November 20 and 21, 2007. The emission testing results of EU 023 and EU 172 show that a performance test 180 days after issuance of this permit is not required. The Permittee is allowed to replace CE 010 with a fabric filter (CE 017). After successful installation of CE 017 the limit of the total quantity of aluminum that may be melted at the facility will then raise to 40,000 tpy. Le Sueur is allowed to add five new furnaces (EU 209 to EU 213) to its operation in the future. The Permittee has included the potential emission calculations for these five furnaces based on Striko Dynarad Furnace #14 (EU 172). EU 172 currently has the maximum potential throughput at Le Sueur; therefore, the Permittee is restricted to install new furnaces with no greater potential to

emit than what EU 172 has. Also, Le Sueur is allowed to operate the Pulse Jet Fabric filter (CE 015) with a new pressure differential range of 0.5 to 6 inches (instead of 2.0 to 4.0 inches).

The following changes are also added to this permit:

- Compliance Assurance Monitoring (CAM) requirements have been added for the Ward Iron Scrubber (CE 010) and two fabrics filter (CE 016 and CE 017). See **Section 2.7** of this TSD for more information about CAM.
- Precap PM and PM-10 limits and language have been added
- Update to reflect current MPCA templates and standard citation formatting.
- Remove completed requirements.
- Update data in Delta for existing emission units, control equipments, and stack vents.
- Update the efficiencies for control equipment.

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

Permit Number and Issuance Date	Action Authorized
07900017-002 February 12, 2002	Installation and operation of a "Pep Set Machine" and its fabric filter. Raised the limit of aluminum that maybe melted at the facility to 17,500 tpy.

1.5. Facility Emissions:

Table 1. Total Facility Potential to Emit Summary with aluminum melt limit of 37,000 tpy

Pollutant	PM Tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC Tpy	Pb tpy	Single HAP Tpy	All HAPs tpy
Total Facility Limited Potential Emissions	241.1	211.2	18.1	145.2	76.9	93.9	0.03	11.3**	35.33
Total Facility Actual Emissions*	85.7	47.1	11.1	25.6	13.97	17.9	0.0	NR***	NR***

* This information is provided by the Permittee for the 2006 year Emissions Inventory purposes

** Benzene

*** NR = Not Reported (The Permittee is not required to report this information on the annual emission inventory)

Table 2. Total Facility Potential to Emit Summary with aluminum melt limit of 40,000 tpy

Pollutant	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	240.1	207.8	18.3	145.3	76.9	101.1	0.03	12.16**	37.96
Total Facility Actual Emissions*	85.7	47.1	11.1	25.6	13.97	17.9	0.0	NR***	NR

* This information is provided by the Permittee for the 2006 year Emissions Inventory purposes

** Benzene

*** NR = Not Reported (The Permittee is not required to report this information on the annual emission inventory)

Table 3. Facility Classification

Classification	Major/Affected Source	*Synthetic Minor	Minor
PSD		PM, PM ₁₀	CO, SO ₂ , NO _x , VOC
Part 70	HAPs, PM ₁₀ , VOC, NO _x	CO	SO ₂
Part 63 NESHAP	HAPs		

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

2. Regulatory Overview of Facility:

2.1 New Source Review (NSR), Prevention of Significant Deterioration (PSD):

Since unrestricted PM and PM-10 emissions exceed 250 tpy, the facility would be a potential major source under NSR, PSD (40 CFR § 52.21) regulations. However, the actual emissions for both pollutants (PM and PM-10) have not actually exceeded the threshold (of 250 tpy); therefore, in this permit, the Permittee chooses to accept synthetic limits to maintain the non-major source classification.

The facility does not process post-consumer scrap and melts no material other than clean charge and clean aluminum scrap generated within the facility. Also, since Le Sueur does not operate a thermal chip dryer, sweat furnace, scrap dryer, de-lacquering kiln, de-coating kiln, or any other equipment/process characteristic of a secondary aluminum processing facility, the facility need not be and is not classified as a secondary aluminum processing facility for purposes of NSR; therefore it is not subject to the 100 tpy emission threshold for PSD. However, Le Sueur is subject to the 250 tpy emission threshold for PSD. In this permit, the Permittee continues to accept synthetic limits and plans to not exceed the major source threshold (of 250 tpy); therefore, Le Sueur is not subject to NSR/PSD in PER 003. In addition, the increase emissions from the permitted modifications in this permit do not exceed the major threshold for NSR/PSD.

2.2 Part 70 Permit Program:

The facility is a major source under the Part 70 permit program (40 CFR pt. 70). See **Table 3** for more information.

2.3 Environmental Assessment Worksheet (EAW)/Environmental Impact Statement (EIS):

In this permit action (PER 003), modifications at Le Sueur do not have potential for air emissions to exceed 100 tpy thresholds. Therefore, both EAW and EIS are not required at this time.

2.4 Hazardous Air Pollutants (HAPs):

According to the projected potential emission calculations for adding the five furnaces (EU 209 to EU 213) in the future, the additions will not result in an increase of potential emissions greater than 10 tons per year of any individual HAP or 25 tons per year of total combined HAPs; therefore, it doesn't trigger Section 112(g) of the Clean Air Act.

2.5 New Source Performance Standards (NSPS):

Le Sueur is not subject to 40 CFR Part 60, subp. OOO – NSPS for Nonmetallic Mineral Processing Plants for the sand crusher (EU 173), which is also an insignificant activity under Minn. R. 7007.1300, subp. 3(I). The Permittee provides the following:

“According to 40 CFR § 60.670(c), ‘fixed sand and gravel plants and crushed stone plants with capacities, as defined in §60.671, of 23 megagrams per hour (25 tons per hour) or less’ are not subject to NSPS subpart OOO. Because the sand reclamation crusher (EU 173) at the facility is designed at capacity of 20 tons/hr subpart OOO does not apply.”

2.6 National Emission Standards for Hazardous Air Pollutants (NESHAP):

- **40 CFR pt. 63, subp. T:**

Le Sueur is not subject to 40 CFR pt. 63, subp. T – NESHAP for Halogenated Solvent Cleaning MACT. The Permittee provides the following:

“According to 40 CFR §63.460(a), the Halogenated Solvent Cleaning MACT ‘applies to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride (CAS No. 75–09–2), perchloroethylene (CAS No. 127–18–4), trichloroethylene (CAS No. 79–01–6), 1,1,1-trichloroethane (CAS No. 71–55–6), carbon tetrachloride (CAS No. 56–23–5) or chloroform (CAS No. 67–66–3), or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.’

The MSDS for the Safety-Kleen 105 solvent indicates that there is less than 0.2 percent by weight concentration of perchloroethylene (CAS No. 127-18-4). Therefore, the Halogenated Solvent Cleaning MACT is not applicable to the parts washers at the facility.”

- **40 CFR pt. 63, subp. RRR:**

Le Sueur is not subject to 40 CFR pt. 63, subp. RRR – NESHAP for Secondary Aluminum Production. The Permittee provides the following:

“Le Sueur does not process post-consumer scrap and does not melt any material other than clean charge and clean aluminum scraps generated within the facility. Also, Le Sueur does not operate a thermal chip dryer, sweat furnace, scrap dryer, de-lacquering kiln, or de-coating kiln.

The die casting industry routinely marks aluminum ingots, sows, etc., with paint, ink, and grease pen marking to identify specific alloys and batch numbers. According to 40 CFR §63.1503, clean charge means; ‘furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343

degree C (650 degree F) or higher; aluminum scrap de-lacquered/de-coated at 482 degree C (900 degree F) or higher, and runaround scrap'. As stated in Vol. 70, No. 190 of the Federal Register, dated October 3, 2005, it is EPA's intent that T-bar, sow, ingot, billet, and alloying elements be considered 'clean charge,' not withstanding ink, grease, or paint markings."

40 CFR pt. 63, subp. MMMM:

Le Sueur is not subject to 40 CFR pt. 63, subp. MMMM – NESHAP for Surface Coating of Miscellaneous Metal Parts and Products. The Permittee provides the following:

"According to the final rule, 'Since mold release agents are applied to molds and are not applied to the part being produced and do not become part of the part being produced, they would be considered part of facility maintenance and would not be subject to the final rule. However, EPA does not believe it is necessary to specifically include mold release agents in the definition of facility maintenance since they would already be covered as a surface coating applied to the tools and equipment of the affected facility.'

The final rule defines Facility Maintenance as, 'the routine repair or renovation (including the surface coating) of the tools, equipment, machinery, and structures that comprise the infrastructure of the affected facility and that are necessary for the facility to function in its intended capacity.'"

• **40 CFR pt. 63, subp. PPPP:**

Le Sueur is not subject to 40 CFR pt. 63, subp. PPPP – NESHAP for Surface Coating of Plastic Parts and Products. The Permittee provides the following:

"According to the EPA compliance contact, Len Lazarus, pad printing is not exempt from the Plastic Parts Coating MACT unless the coatings do not contain any organic HAPs or actual use of HAP – containing coating less than 100 gallons/year.

According to the data shown in MPCA's calculations in the Technical Support Document (TSD) to Permit No. 07900017-001, actual use of HAP – containing coatings is approximately 82 gallons/yr and according to the data provided by Le Sueur for 10/1/2005 through 10/1/2006, actual use of HAP – containing coatings is less than 50 gallons/yr. Therefore, the Plastic Parts Coating MACT is not applicable to pad printing because actual use of HAP – containing coatings is less than 100 gallons/yr."

2.7 Compliance Assured Monitoring (CAM):

The Facility has two units (EU 095 and EU 177) that are subject to CAM (40 CFR pt. 64). Both have potential pre-control emissions greater than 100 tpy (PM) and have control equipment (CE 010, CE 016, and CE 017) that is used to comply with an emissions limit or standard (PM/PM₁₀ limit). Both have potential post-control emissions less than 100 tpy; therefore, the units are considered other (vs. large) pollution-specific emissions units (PSEUs).

For CAM, the Permittee submitted CAM proposals as required by 40 CFR pt. 64.3.

In evaluating the periodic 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 5 summarizes the monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate or where CAM applies.

2.8 Minnesota State Rules:

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

- Minn. R. 7011.0500 to 7011-0553 for New and Existing Indirect Heating Fossil Fuel Burning Equipment
- Minn. R. 7011.0600 to 7011.0625 for Direct Heating Fossil Fuel Burning Equipment
- Minn. R. 7011.0700 to 7011.0735 for Pre and Post-1969 Industrial Process Equipment

Table 4. Regulatory Overview of Facility

	Applicable Regulations	Comments:
Total Facility, GP 001 to GP 008	Title I limit to avoid NSR	Limit set on quantity of aluminum that may be melted (37,000 tpy with CE 010 or 40,000 tpy with CE 017). This inherently limits the quantity of product that may be produced, and the amount of finishing work done and the amount of sand used.
CE002 to CE004, CE006, CE008 to CE013	Title I condition to avoid NSR	Operation of control equipment is required in order to avoid NSR
GP 005, CE 010, CE 016, CE 017	Title I condition to avoid NSR	Compliance Assurance Monitoring (CAM) requirements
GP 001	Minn. R. 7007.0610	Standards of Performance for Direct Heating Equipment
GP 003	Minn. R. 7007.0510/0515	Standards of Performance for Indirect Heating Equipment
GP 002, GP 004 to GP 008, EU 107, EU 108, EU 146	Minn. R. 7011.0710/0715	Standards of Performance for Industrial Process Equipment

3. Technical Information:

3.1 Calculations of Potential to Emit (PTE):

Appendix II of the Technical Support Document (TSD) summarizes the PTE of the Facility contains detailed spreadsheets and supporting information prepared by Wenck Associates Inc. for the metal melting limit of 37,000 tpy and 40,000 tpy. The following sub-sections are calculation examples and methods.

3.1.1 Aluminum melting – GP 001:

Because the facility is not secondary aluminum production the Permittee is allowed to use the PM emission factor from AP 42; *Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-3, Reverberatory Furnace (uncontrolled)*. However, Iron has a density of 7.86 grams per cubic centimeter (g/cm³) and Aluminum's density is 2.7 g/cm³; therefore, Le Sueur calculates the iron to aluminum density ratio and use this ratio to adjust the emission factor (AEMF). Using the adjusted emission factor has been done at another foundry from the state of Illinois named Internet Decatur Foundry. Le Sueur also has done PM/PM-10 testing for HI TEQ Wet Bath Furnace #12 (EU 023/SV 045) and Striko Dynarad Furnace #14 (EU 172/SV 102). Using the example permit from Internet Decatur Foundry and the performance test results at Le Sueur Inc.'s Furnace, the Permittee can calculate the potential air emissions using AEMF.

Example Calculation – Furnaces

$$\text{PM PTE} = 0.72 \frac{\text{lb PM}}{\text{ton melted}} \times 1.5 \frac{\text{ton melted}}{\text{hour}} \times 8760 \frac{\text{hours}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 4.73 \frac{\text{ton PM}}{\text{year}}$$

Adjusted emission factor (AEMF) = $\frac{a}{b}$ = 0.72, where :

a = emission factor = 2.1 lb/ton iron (AP42 - Chapter 12.10 , Gray Iron Foundries (1/95), Table 12.10 - 3, Reverberatory Furnace (uncontrolled))

$$b = \text{Iron to Aluminum density ratio} = \frac{\text{density of Fe}}{\text{density of Al}} = \frac{7.86 \text{ g}}{2.70 \text{ g}} \times \frac{\text{cubiccentimeter}}{\text{cubiccentimeter}} = 2.91$$

3.1.2 Pouring/Casting/Cooling – GP 002:

Using AP42 (*Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-7, Pouring/Cooling (Uncontrolled)*) emission factor (EF) for pouring/casting/cooling equals 4.2 lb/ton iron. Because there is a split between pouring/casting and cooling emission factors are then calculated separately.

- For Pouring/Casting:
 - (a) For PM/PM-10 emission: EF = 2.8 lb/ton iron (*Emission Factor Source: EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400708, Pouring/Casting (Uncontrolled)*).
 - (b) For VOC emission: EF = 0.14 lb/ton iron (*Emission Factor Source: EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400320, Pouring/Casting (Uncontrolled)*).
 - (c) For NOx emission: EF = 0.01 lb/ton iron (*Emission Factor Source: EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400320, Pouring/Casting (Uncontrolled)*).
 - (d) For SO₂ emission: EF = 0.02 lb/ton iron (*Emission Factor Source: EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400320, Pouring/Casting (Uncontrolled)*).

Example Calculation – Pouring/Casting:

$$\text{PM PTE} = 2.8 \frac{\text{lb PM}}{\text{ton cast}} \times 37,000 \frac{\text{ton cast}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 51.80 \frac{\text{ton PM}}{\text{year}}$$

- For Cooling:
 - (a) For PM/PM-10 emission factor: EF = 1.4 lb/ton iron (*Emission Factor Source: EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400320, Pouring/Casting (Uncontrolled)*).
 - (b) For VOC, NOx, and SO₂, same values of adjusted emission factors can be used from Pouring/Casting.

Example Calculation – Cooling:

$$\text{PM PTE} = 1.4 \frac{\text{lb PM}}{\text{ton cast}} \times 37,000 \frac{\text{ton cooling}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 25.9 \frac{\text{ton PM}}{\text{year}}$$

3.1.3 Indirect Heating Equipment – GP 003:

The maximum uncontrolled potential emission (PTE) is calculated using emission factors from section 1.4 of *AP-42 "Natural Gas Combustion" (7/98)*, the heat input (MMBtu/hr), the heat value (Btu/scf), and maximum consumption rate (MMscf/hr). Le Sueur uses either natural gas (NG) or propane as fuel. PTE calculations were done for each fuel and the highest value (worse-case) of PTE will be used.

Example Calculation – Indirect Heating (using NG for fuel):

$$\text{PM PTE} = 6 \frac{\text{MM Btu}}{\text{hour}} \times \frac{\text{scf}}{1020 \text{ Btu}} \times 7.6 \frac{\text{lb PM}}{\text{MMcf}} \times 4.38 = 0.2 \frac{\text{ton PM}}{\text{year}}$$

Where:

scf is standard cubic feet and 4.38 is the conversion factor to convert from lb/hr to ton/year (tpy)

3.1.4 Grinding/Cleaning – GP 004:

Using the iron to aluminum density ratio (2.91, see example 3.1.1 above) the adjusted emission factor (AEF) is used. The emissions of metal HAPs are calculated based on the total PM emissions and the maximum metal HAP content of all the aluminum alloys used at Le Sueur.

- For PM emission: EF = 17 lb/ton iron (*Emission Factor Source: AP42; Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-7, Cleaning/Finishing (Uncontrolled)*). Therefore, AEF = 17 / 2.91 = 5.84 lb/ton aluminum.
- For PM-10 emission: EF = 1.7 lb/ton iron (*Emission Factor Source: AP42; Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-7, Cleaning/Finishing (Uncontrolled)*). Therefore, AEF = 1.7 / 2.91 = 0.58 lb/ton aluminum.

Example Calculation – Grinding/Cleaning:

$$\text{PM PTE} = 5.84 \frac{\text{lb PM}}{\text{ton cast}} \times 3,700 \frac{\text{ton grinding}}{\text{year}} \times (1 - 72\%) \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 3.02 \frac{\text{ton PM}}{\text{year}}$$

3.1.5 Blasting Equipment – GP 005:

Le Sueur has two different blasting operations: Abrasive blasting and Tumble blast.

a) Abrasive blasting (EU 082 and EU 177):

Because the published emission factors available in EPA's AP-42 and the Air Quality Permits Handbook by STAPPA-ALAPCO are not specific to the aluminum abrasive blasting cabinets located at Le Sueur.

Therefore, the Permittee uses mass balance of the facility's actual data to calculate the PTE. Le Sueur also uses a safety factor of 1.5 to calculate the estimated emission factor (AEF).

Example Calculation – Blasting equipment:

$$\text{PM PTE} = 0.0061 \frac{\text{lbs PM}}{\text{lb metal part}} \times 3,736.14 \frac{\text{ton}}{\text{year}} \times (1 - 99\%) \frac{\text{ton}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 0.23 \frac{\text{ton PM}}{\text{year}}$$

Where:

EF = .004, AEF = 0.004 x 1.5 = .0061 lbs PM/lb of metal part

b) Tumble blast (EU 095):

Using the maximum hourly throughput and the emission factor listed in *STAPPA-ALAPCO, Section 3.3, Table 3-2, "Confined Abrasive Blasting Cabinets/Rooms", (5/30/91)* PTE can then be calculated. An example calculation is given below:

Example Calculation – Tumble Blast:

$$\text{PM PTE} = 8 \frac{\text{lbs PM}}{\text{ton steel shot}} \times 22.74 \frac{\text{lbs}}{\text{hour}} \times 4.38 \times (1 - 99\%) = 7.97 \frac{\text{ton PM}}{\text{year}}$$

where:

EF = 8 lb/ton steel shot and 4.38 is the conversion factor to convert from lb/hr to ton/year (tpy)

3.1.6 Core Machines:

a. Cold box Core Making (EU 070, EU 074, EU 077, EU 080, and EU 178):

"Cold box" process involves no heat in the curing process but instead catalyst 705 and isocures are added to core sand. Emissions are directly related to the amount of core sand used. Therefore, PTE calculations can be based on emission factors for sand handling. Le Sueur has the following information:

- PM/PM-10 emissions: EF = 0.0013 lb/ton sand handled (*Emission Factor Source: AP-42; Chapter 11.19.1 Sand and Gravel Processing (11/95), Table 11.19.1-1, for sand handling, transfer, and storage w/*

wet scrubber control). Assuming 90% controlled factor for the wet scrubber, the uncontrolled emission factor is 0.013 lb/ton sand handled.

Example PM Calculation – Cold Box Core making:

$$\text{PM PTE} = 0.013 \frac{\text{lbs PM}}{\text{ton sand handled}} \times 8.27 \frac{\text{ton}}{\text{hour}} \times 4.38 = 0.5 \frac{\text{ton PM}}{\text{year}}$$

- VOC emissions: EF = 0.023 lb/lb resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Phenolic Urethane Cold Box Binder*). See example below:

Example VOC Calculation – Cold Box Core making:

$$\text{VOC PTE} = 46.75 \frac{\text{lbs VOC}}{\text{ton resin in cores}} \times 1,316 \frac{\text{ton}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 30.76 \frac{\text{ton VOC}}{\text{year}}$$

- SO₂ emissions: EF = 6.1 x 10⁻⁵ lb/lb resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Phenolic Urethane Cold Box Binder*).

Example SO₂ Calculation – Cold Box Core making:

$$\text{SO}_2 \text{ PTE} = 0.12 \frac{\text{lbs SO}_2}{\text{ton resin in cores}} \times 1.13 \frac{\text{ton}}{\text{hour}} \times 4.38 = 0.6 \frac{\text{ton SO}_2}{\text{year}}$$

- NO_x emissions: EF = 4.4 x 10⁻⁵ lb/lb resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Phenolic Urethane Cold Box Binder*).

Example NO_x Calculation – Cold Box Core making:

$$\text{NO}_x \text{ PTE} = 0.09 \frac{\text{lbs NO}_x}{\text{ton resin in cores}} \times 1.13 \frac{\text{ton}}{\text{hour}} \times 4.38 = 0.44 \frac{\text{ton NO}_x}{\text{year}}$$

b) Hot Box / Shell Core making (EU 076, EU 078, EU 079, EU 081, EU 136, EU 139, EU 140, EU 188, and EU 189):

“Hot Box” refers to the fact that heat rather than a catalyst is used in the reaction to create cores through this process. According to the Material Safety Data Sheet (MSDS) there is 0.055 ton of resin in a ton of Shell sand. Since, not all of the castings at Le Sueur are made using cores Le Sueur doesn’t use AP-42 from chapter 12.10 for Gray Iron Foundries. However, PTE for PM/PM-10 can be calculated based on amount of core sand used; therefore, EF from sand handling should be used (*Emission Factor Source: AP-42; Chapter 11.19.1 Sand and Gravel Processing (11/95), Table 11.19.1-1, for sand handling, transfer, and storage w/ wet scrubber control*). EF = 0.013 lb/ton.

Example PM/PM-10 Calculation – Hot Box Core making:

$$\text{PM/PM-10 PTE} = 0.013 \frac{\text{lbs PM/PM - 10}}{\text{ton sand handled}} \times 5.4 \frac{\text{ton}}{\text{hour}} \times 4.38 = 0.3 \frac{\text{ton PM/PM - 10}}{\text{year}}$$

Where EF = 0.013 lb/ton sand handled

Example VOC Calculation – Hot Box Core making:

$$\text{VOC PTE} = 44.84 \frac{\text{lbs VOC}}{\text{ton resin in cores}} \times 0.3 \frac{\text{ton}}{\text{hour}} \times 4.38 = 58.2 \frac{\text{ton VOC}}{\text{year}}$$

Where EF = .0024 lb/lb resin in cores = 44.84 lbs/ton resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Shell Binder*)

Example SO₂ Calculation – Hot Box Core making:

$$\text{SO}_2 \text{ PTE} = 7.02 \frac{\text{lbs SO}_2}{\text{ton resin in cores}} \times 0.3 \frac{\text{ton}}{\text{hour}} \times 4.38 = 9.11 \frac{\text{ton SO}_2}{\text{year}}$$

Where EF = .0035 lb/lb resin in cores = 7.02 lbs/ton resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Shell Binder*)

Example NO_x Calculation – Hot Box Core making:

$$\text{NO}_x \text{ PTE} = 1.99 \frac{\text{lbs NO}_x}{\text{ton resin in cores}} \times 0.3 \frac{\text{ton}}{\text{hour}} \times 4.38 = 2.58 \frac{\text{ton NO}_x}{\text{year}}$$

Where EF = .000994 lb/lb resin in cores = 1.99 lbs/ton resin in cores (*Emission Factor Source: Modern Casting, 10/94, "Calculating Emission Factors for Pouring, Cooling and Shakeout" for Shell Binder*)

3.1.7 **Knockout/Shakeout (GP 007):**

Knockout/shakeout PM, PM-10, and VOC Potential emissions are calculated using AP42 emission factor for casting shakeout in gray iron foundries.

- For PM emission: EF = 3.2 lb/ton iron (*Emission Factor Source: AP42; Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-7, Shakeout (Uncontrolled)*). Using the iron to aluminum density ratio = 2.91 the adjusted PM emission factors is 1.10 lb/ton aluminum.

Example PM Calculation – Knockout/Shakeout:

$$\text{PM PTE} = 1.10 \frac{\text{lbs PM}}{\text{ton Aluminum}} \times 37,000 \frac{\text{ton Aluminum}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 20.34 \frac{\text{ton PM}}{\text{year}}$$

- For PM-10 emission: EF = 2.24 lb/ton iron (*Emission Factor Source: AP42; Chapter 12.10 Gray Iron Foundries (1/95), Table 12.10-7, Shakeout (Uncontrolled), Table 12.10-8*). Using the iron to aluminum density ratio; therefore, PM-10 AEF = 0.77 lb/ton aluminum.

Example PM-10 Calculation – Knockout/Shakeout:

$$\text{PM-10 PTE} = 0.77 \frac{\text{lbs PM - 10}}{\text{ton Aluminum}} \times 37,000 \frac{\text{ton Aluminum}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 14.24 \frac{\text{ton PM - 10}}{\text{year}}$$

- For VOC emission: EF = 1.2 lb/ton iron (*EPA WebFIRE Database; Gray Iron Foundries (12/06), SCC 30400331, Shakeout (Uncontrolled)*). Using the iron to aluminum ratio; therefore, VOC AEF = 0.41 lb/ton aluminum.

Example VOC Calculation – Knockout/Shakeout:

$$\text{VOC PTE} = 0.41 \frac{\text{lbs VOC}}{\text{ton Aluminum}} \times 37,000 \frac{\text{ton}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 7.63 \frac{\text{ton VOC}}{\text{year}}$$

3.1.8 **Sand transfer:**

Sand transfer operation at Le Sueur involves sand handling, sand silos, and sand transfer.

- For sand handling, Mullor (EU 107) and Mullor Barrel screen (EU 108) are two emission units associated with this operation. Le Sueur uses the Mullor Barrel Screen stack test results dated October 17, 2006 (2.8 lbs PM/hr / 34.448 tons sand/hr) and multiply by a safety factor of two (2) to estimate the emission factor for both PM and PM-10 potential emission calculations

Emission Factor Derivation for Sand Handling (EU 107 and EU 108):

$$\text{PM \& PM-10 EF} = 2.8 \frac{\text{lbs PM}}{\text{ton sand handled}} / 34.448 \frac{\text{ton sand handled}}{\text{hour}} \times 2 = 0.16 \frac{\text{lbs}}{\text{ton sand handled}}$$

Emission Factor Source: Mullor Barrel Screen Stack Test, dated October 17, 2006

Example PM Calculation - Sand Handling:

PM PTE =

$$0.16 \frac{\text{lbs PM}}{\text{ton sand handled}} \times 744,600 \frac{\text{tons sand handled}}{\text{year}} \times \frac{1 \text{ ton}}{2000 \text{ lb}} \times (1 - (100\% \times 90\%)) = 6.03 \frac{\text{ton PM}}{\text{year}}$$

- Sand Silos and Sand Transfer (EU 104, EU 105, EU 106, EU 146, and EU 200):

Emission factors were estimated using AP42 for sand and gravel handling (*Emission Factor Source: AP-42; Chapter 11.19.1 Sand and Gravel Processing (11/95), Table 11.19.1-1, for sand handling, transfer, and storage w/ wet scrubber control*)

Example PM Calculation - Sand Silos/Sand Transfer:

$$\text{PM PTE} = 0.013 \frac{\text{lbs PM}}{\text{ton sand handled}} \times 306,600 \frac{\text{tons sand handled}}{\text{year}} \times \frac{\text{ton}}{2000 \text{ lb}} = 1.99 \frac{\text{ton PM}}{\text{year}}$$

3.1.9 Core Wash:

VOC and PM/PM-10 emissions from the core and mold wash operations were calculated using the information on the MSDSs included with the 2007 permit application. According to the MSDS for Velvacoat AL 7036 SL (Silver) and the MSDS for Velvacoat GAC 854 SI (Black), the coatings do not contain any hazardous air pollutants (HAPs). Limited usage reported in the application was based on the mass ratio of core wash to core sand used.

Example Calculation – VOC from Velvacoat AL 7036 Silver usage:

$$47,170.72 \frac{\text{lb Velvacoat}}{\text{year}} \times 90\% \text{ VOC by weight} \times \frac{1 \text{ ton}}{2000 \text{ lb}} = 21.2 \frac{\text{ton VOC}}{\text{year}}$$

All core wash emissions are listed in the PTE summary (Attachment 1) under FS 001 and FS 002.

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

Table 5. Periodic Monitoring

Emission Unit, Group, or Control equipment	Requirement or Emission limit (basis)	Additional Monitoring	Discussion
Melt furnaces: GP 001	(Title I limit to avoid NSR) <ul style="list-style-type: none"> • 37,000 tpy of aluminum melted (with scrubber-CE 010) • 40,000 tpy of aluminum melted (with fabric filter-CE 017 replacing CE 010) 	Recordkeeping: Monthly records of monthly melt and 12 month rolling sum	The Permittee should operate at a production rate to meet the melt limit.
	(MN Direct Heating Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas (gr/dscf) • Opacity limit ≤ 20 percent opacity 	Performance Testing for PM and PM-10	Furnace #14 (EU 172) has the maximum potential emission at the facility. The Permittee has submitted performance test result for EU 172 (see Attachment 3) which demonstrates compliance. Therefore, it is unlikely to exceed the limit.
Pouring/ Casting/ Cooling: GP 002	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas 	None	Note: for units in operation before July 9, 1969, the opacity limit ≤ 20 percent opacity also includes an exception for one six-minute period per hour of not more than 60 percent opacity. Comparing the calculated PM's PTE (2.29 lbs/hr) to the calculated limit (2.46 lbs/hr, see Attachment 1). It is unlikely to exceed the limit. Therefore, no additional monitoring is required.

Emission Unit, Group, or Control equipment	Requirement or Emission limit (basis)	Additional Monitoring	Discussion
	<ul style="list-style-type: none"> • Opacity limit \leq 20 percent opacity (units not in operation before July 9, 1969) 		
Indirect Heating: GP 003	<p>(MN Indirect Heating Equipment standard)</p> <ul style="list-style-type: none"> • PM limit \leq 0.60 lbs per MMBtu heat input (for units in operation prior to Jan. 31, 1977) • For units in operation not prior to Jan. 31, 1977, PM limit \leq 0.4 lbs per MMBtu heat input • Opacity limit \leq 20 percent opacity 	None	<p>The Permittee must use either natural gas or propane for fuel.</p> <p>0.60 lbs/MMBtu = 127.9 lbs/hr</p> <p>0.40 lbs/MMBtu = 85 lbs/hr</p> <p>The calculated value for uncontrolled potential emission at the facility is 1.6 lbs/hr for PM. It is unlikely to exceed the limits.</p>
Grinding/Cleaning: GP 004, CE 002, CE 004, and CE 011	<p>(MN Industrial Process Equipment standard)</p> <ul style="list-style-type: none"> • PM limit \leq 0.30 grains per dry standard cubic foot of exhaust gas • Opacity limit \leq 20 percent opacity 	Operation, Maintenance, and Monitoring of control equipment	<p>Update emission calculation for group 4 is attached to the TSD (see Attachment 1). The calculated PM's PTE is lower than calculated limit for all units (see below). It is unlikely for Le Sueur to exceed the limit.</p> <p>EU 086: 1.08 lb/hr (PTE), 8.77 lb/hr (limit), EU 087: 1.08 lb/hr (PTE), 8.77 lb/hr (limit), EU 090: 0.81 lb/hr (PTE), 8.77 lb/hr (limit), EU 091: 0.81 lb/hr (PTE), 8.77 lb/hr (limit), EU 092: 0.81 lb/hr (PTE), 8.77 lb/hr (limit), EU 093: 0.81 lb/hr (PTE), 8.77 lb/hr (limit), EU 094: 1.24 lb/hr (PTE), 3.86 lb/hr (limit), and EU 195: 1.08 lb/hr (PTE), 8.77 lb/hr (limit). No testing is needed from this permit.</p>
Blasting: GP 005,	(MN Industrial	Operation,	Note: for units in operation before July 9, 1969,

Emission Unit, Group, or Control equipment	Requirement or Emission limit (basis)	Additional Monitoring	Discussion
CE 010, CE 013, CE 016, and CE 017	Process Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas • Opacity limit ≤ 20 percent opacity 	Maintenance, and Monitoring of control equipment, see CE 010, CE 016, and CE 017 for CAM.	the opacity limit ≤ 20 percent opacity also includes an exception for one six-minute period per hour of not more than 60 percent opacity. Comparing the calculated PM's PTE (0.05 lbs/hr, 1.82 lbs/hr, and 3.18 lbs/hr) to the calculated limit (7.67 lbs/hr, 3.79 lbs/hr, and 15.63 lbs/hr respectively, see Attachment 1). It is unlikely to exceed the limits.
Core: GP 006	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas • Opacity limit ≤ 20 percent opacity 	None	Note: for units in operation before July 9, 1969, the opacity limit ≤ 20 percent opacity also includes an exception for one six-minute period per hour of not more than 60 percent opacity. Comparing the calculated PM's PTE (0.11 lbs/hr and 0.07 lbs/hr) to the calculated limit (13.3 lbs/hr and 10.2 lbs/hr respectively, see Attachment 1). It is unlikely to exceed the limits.
Knockout/ Shakeout: GP 007	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas • Opacity limit ≤ 20 percent opacity 	None	Note: for units in operation before July 9, 1969, the opacity limit ≤ 20 percent opacity also includes an exception for one six-minute period per hour of not more than 60 percent opacity. Comparing the calculated PM's PTE (3.10 lbs/hr) to the calculated limit (6.82 lbs/hr, see Attachment 1). It is unlikely for Le Sueur to exceed the limit.
Sand silos: GP 008, CE 015	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> • PM limit ≤ 0.30 grains per dry standard cubic foot of exhaust gas • Opacity limit \leq 	Operation, Maintenance, and Monitoring of control equipment of CE 015	Note: for units in operation before July 9, 1969, the opacity limit ≤ 20 percent opacity also includes an exception for one six-minute period per hour of not more than 60 percent opacity. Comparing the calculated PM's PTE (0.005 lbs/hr) to the calculated limit (5.40 lbs/hr, see Attachment 1). It is unlikely for Le Sueur to exceed the limit.

Emission Unit, Group, or Control equipment	Requirement or Emission limit (basis)	Additional Monitoring	Discussion
	20 percent opacity		
Sand mullor: EU 107	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> PM limit \leq 90 percent control efficiency Opacity limit \leq 20 percent opacity	Operation, Maintenance, and Monitoring of control equipment of CE 012	Comparing the calculated PM's PTE (1.38 lbs/hr) to the calculated limit (35.24 lbs/hr, see Attachment 1). It is unlikely for Le Sueur to exceed the limit.
Mullor Barrel Screen: EU 108	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> PM limit \leq 0.30 grains per dry standard cubic foot of exhaust gas Opacity limit \leq 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity. 	Operation, Maintenance, and Monitoring of control equipment	Two performance tests have been completed for EU 108 with the most recent on 10/17/2007. Both tests demonstrate compliance. It is unlikely for Le Sueur to exceed the limit. Based on the tests result, no further testing is required for this unit.
Sand transfer: EU 146	(MN Industrial Process Equipment standard) <ul style="list-style-type: none"> PM limit \leq 0.30 grains per dry standard cubic foot of exhaust gas Opacity limit \leq 20 percent opacity 	None	Comparing the calculated potential emission for PM (0.91 lbs/hr) to the calculated limit (34.16 lbs/hr). It is unlikely for Le Sueur to exceed the limit.
Wet Scrubber: CE 010	(Title I limit to avoid NSR + Minn. R. 7017.0200)	Water Flow rate, Water supply pressure, and	The proposed CAM is similar to the Minnesota Performance Standard for Control Equipment for scrubbers (daily pressure drop reading, periodic

Emission Unit, Group, or Control equipment	Requirement or Emission limit (basis)	Additional Monitoring	Discussion
	<ul style="list-style-type: none"> PM/PM-10 limit $\geq 90\%$ overall efficiency Water flow rate limit ≥ 21 gallons per minute <p>Pressure Drop limit ≥ 5 inches of water column and ≤ 7 inches of water column</p>	Pressure drop monitoring, recordkeeping, O&M, inspections (CAM)	inspections, corrective actions, and O&M). For wet scrubber, the daily water flow rate reading, water supply pressure, pressure drop, and the control efficiency are important limits to keep the Permittee to stay in compliance.
Fabric Filters: CE 016 and CE 017	<p>(Title I limit to avoid NSR + Minn. R. 7017.0200)</p> <ul style="list-style-type: none"> PM/PM-10 limit $\geq 99\%$ overall efficiency Pressure Drop (based on manufacturer's specification) 	Pressure drop monitoring, recordkeeping, O&M, inspections (CAM)	The proposed CAM is similar to the Minnesota Performance Standard for Control Equipment for fabric filters (daily pressure drop reading, periodic inspections, corrective actions, and O&M). For these filters, the daily pressure drop reading is the primary compliance method for both the emissions limit as well as the control efficiency limit. For this reason, the pressure drop range is a limit (standard MPCA practice for fabric filters), not just a control equipment indicator range; therefore, having pressure drop values outside the specified range would be considered a deviation of the pressure drop limit, not just an excursion for CAM.

3.3 Insignificant Activities:

Le Sueur Incorporated has several operations that qualify as insignificant activities under Minn. Rules. These are included in Appendix I to the TSD, with the applicable requirements. Emissions from all insignificant activities (except the thermoplastic injection molding and plastics pad printing activities) are included in the total facility potential to emit. Thermoplastic injection molding and plastic pad printing are insignificant due to their extremely low potential emissions, under Minn. R. 7007.1300 subp. 3(I). Maximum potential emissions are minor, which is why they were not included in the total facility PTE. Total facility VOC emissions are well below the 250 tpy PSD threshold. Table 6 lists the limits and periodic monitoring requirements associated with insignificant activities.

Table 6. Insignificant Activities' limit and monitoring

Insignificant Activity	General Applicable Emission limit	Discussion
Fuel use: space heaters fueled by, kerosene, natural gas, or propane	$PM \leq 0.6$ or 0.4 lb/MMBtu, depending on year constructed $Opacity \leq 20\%$ with exceptions (Minn. R. 7011.0510/515)	For this unit, based on the fuels used and EPA published emissions factors, it is highly unlikely that it could violate the applicable requirement. In addition, these types of units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Fabrication operations: equipment used exclusively for forging, pressing, drawing, spinning, or extruding hot metals	PM , variable depending on airflow $Opacity \leq 20\%$ (Minn. R. 7011.0710/715)	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 significant particulate matter. In addition, these units would be operated and vented directly into a building, so testing is not feasible.
Brazing, soldering or welding equipment	PM , variable depending on airflow $Opacity \leq 20\%$ (Minn. R. 7011.0710/715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for PM or opacity is not feasible.
Individual units with actual emissions less than (a) 4,000 lb/year of CO; and (b) 2000 lb/year each of NO _x , SO ₂ , PM, PM-10, VOCs, and ozone	PM , variable depending on airflow $Opacity \leq 20\%$ (with exceptions) (Minn. R. 7011.0510 and Minn. R. 7011.0515) or $SO_2 \leq 2.00$ lb/MMBtu (liquid fuels) $PM \leq 0.4$ lb/MMBtu (Minn. R. 7011.0545)	These are 4 rooftop HVAC units and make-up air heater. All of these units have PTE less than 2000/year threshold. In addition, these particular activities are those not associated with production, so they would be infrequent. Testing or monitoring is not feasible.
	PM , variable depending on source gas volume (Minn. R. 7011.0735), $Opacity \leq 20\%$ or $SO_2 \leq 2.00$ lb/MMBtu	These are 3 fuel fired aging/stress relief ovens. Each has capacity of 1.00 MMBtu per hour or less. It is unlikely that they could violate the applicable requirement. No testing for PM or opacity is required.

Insignificant Activity	General Applicable Emission limit	Discussion
	(liquid fuels) (Minn. R. 7011.0610)	
	PM \leq 0.30 gr/dscf or process weight rate, Opacity \leq 20% (Minn. R. 7011.0710 or (Minn. R. 7011.0715)	These are 3 electric aging/stress relief ovens, 4 individual units used for knockout/shakeout of molds and cores, a central vacuum system, a crusher sand reclamation, thermoplastic injection molding operation, and a plastic pad printing operation. For these units, it is highly unlikely that they could violate the applicable requirement, they are small size operations, so testing for PM or opacity is not feasible.
Equipment venting PM/PM ₁₀ inside a building, provided that emissions from the equipment are: a). filtered through an air cleaning system; and b). vented inside of the building 100% of the time	PM, variable depending on airflow Opacity \leq 20% (Minn. R. 7011.0715)	For these units, it is highly unlikely that they could violate the applicable requirement. In addition, these units are vented inside a building, so testing for PM or opacity is not feasible.

3.4 Permit Organization:

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

Appendix 1 is a listing of the Facility's Insignificant Activities and their applicable requirements. This is a fairly standard way to include these in the permit, since it is highly unlikely the MPCA would need to have these as trackable items in Delta.

3.5 Comments Received:

Public Notice Period: 5/29/2008 – 6/27/2008

EPA 45-day Review Period: 5/29/2008 – 7/13/2008

Comments were not received from the public during the public notice period. Changes to the permit were not made to the permit as a result of the comments.

The permit was sent to EPA for their 45-day review on 5/29/2008. Comments were not received from EPA during their review period. Changes to the permit were not made as a result of the comments.

4. Conclusion

Based on the information provided by Le Sueur Inc., the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 07900017-003 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: Hien Le (permit writer/engineer)
 Sarah Kilgriff (enforcement)
 Sean O'Connor (stack testing)
 Toni Volkmeier (peer reviewer)

AQ File No. 170; DQ 688

Attachments: 1. Air emissions summary and calculations
 2. Example permit of Internet Decatur Foundry
 3. Test results of Furnaces EU 023 and EU 172 at Le Sueur
 4. Emission unit pictures of GP002
 5. CD-01
 6. Emission Unit Description from Delta (paper copy only)

ATTACHMENT 1
AIR EMISSIONS SUMMARY AND CALCULATIONS

ATTACHMENT 2
EXAMPLE PERMIT FROM INTERMET DECATUR FOUNDRY

ATTACHMENT 3

TEST RESULTS of FURNACES (EU 023 and EU 172) at LE SUEUR INCORPORATED

ATTACHMENT 4
EMISSION PICTURES of GROUP 2

ATTACHMENT 5
A COPY of CD-01

ATTACHMENT 6
EMISSION UNIT DESCRIPTION FROM DELTA (paper copy only)