

**AIR EMISSION PERMIT NO. 13700005-001  
IS ISSUED TO**

United States Steel Corporation

**US Steel Minnesota Ore Operations (Minntac)**  
County Highway 102  
Mountain Iron, St. Louis County, MN 55768-0417

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	January 15, 1995 (Original submittal)
Total Facility Operating Permit	September 23, 1997 (Supplemental)
Biomass Minor Amendment	March 26, 2002

This permit authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit and with all general conditions listed in Minn. R. 7007.0800, subp. 16, and all standard permit requirements listed in 40 CFR § 70.6(a) which are incorporated by reference. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

**Permit Type:** Federal ; Part 70

**Issue Date:** February 26, 2003

**Expiration:** February 26, 2008  
All Title I Conditions do not expire.

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

For Sheryl A. Corrigan  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Table C: Compliance Schedule**

**Appendix Material:**

**Appendix A: { Not applicable to this permit }**

**Appendix B: Visible Emission Checklists**

**NOTICE TO THE PERMITTEE:**

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

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

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

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

**PERMIT SHIELD:**

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

## **FACILITY DESCRIPTION:**

The Permittee owns and operates a taconite mining and processing facility at County Highway 102, on the Mesabi Range north of the City of Mountain Iron, St. Louis County, Minnesota.

Taconite is a rock bearing 15 to 30 percent magnetic iron. The ore is mined in an open pit, and reduced in size by crushers until it reaches a powdery consistency. Iron oxide concentrate is separated magnetically, while the remaining portion of the ore (tailings) is sent to a disposal basin. Limestone and/or dolomite (fluxstone) is added with bentonite (binder) to the concentrate. The mixture is formed into round “green balls” (unfired pellets) in a balling drum. Green balls are fed into an agglomerator line consisting of a traveling grate and a rotary kiln. Pellets are hardened (induration), with the fluxstone constituent calcined (calcination), in the kiln at high temperature. Leaving the kiln, pellets are cooled and stored for transport to blast iron furnaces out of state.

The agglomerator lines were built in three stages or steps, Step I (Lines 1 through 3) in 1967, Step II (Lines 4 and 5) in 1972, and Step III (Lines 6 and 7) in 1978. Lines 1 and 2 are no longer in operation. While the main product is fluxed pellets which are used in blast furnaces to make molten iron, other products such as acid pellets, iron ore concentrate, blast furnace trim, and railroad ballast are also made to order.

This Part 70 permit action does not cover an ongoing permit action under federal Prevention of Significant Deterioration (PSD) regulations (40 CFR § 52.21), with the exception that the Permittee shall meet the Compliance Schedule (Table C) requirements for completing the PSD permit.

The PSD permit action is retrospective or backward-looking, concerning the auxiliary burners and the alternative fuels of the main burners for the taconite pellet agglomerator lines (Lines 3, 4, 5, 6, and 7). Earlier, in a period from 1987 to 1989, the Permittee added auxiliary burners in the traveling grate at Lines 3 through 7 to facilitate fluxed pellet production. The Permittee commenced construction prior to receiving a written air emission permit. During the same period, the Permittee also requested permission to test burn wood and oat hulls in the kiln burners of Lines 3, 4, and 5. The MPCA granted the request, and found out later that permanent equipment had been installed in order to burn these fuels. These actions were allegedly in violation of PSD regulations, and were addressed in a May 15, 1991, Stipulation Agreement between the MPCA and the Permittee. As required by the Stipulation Agreement, the backward-looking PSD permit action must specify applicable requirements and operating and emission limitations for the auxiliary burners and the alternative fuels of the main burners. Once the PSD permit is issued, its requirements will be incorporated into the Part 70 permit.

This Part 70 permit action has updated the requirements established in previous permit actions, including Air Emission Permit No. 13700005-013, issued on September 19, 2002, and the minor permit amendment application for authorizing combustion of biomass fuel, which was received by the MPCA on March 26, 2002.

**APPENDIX MATERIAL**

**Facility Name: U.S. Steel Minnesota Ore Operations**

**Permit Number: 13700005- 001**

Appendix A – Operator’s Summary (*not used in this permit*)

Appendix B – Visible Emission Checklists

## **APPENDIX B**

### **VISIBLE EMISSION CHECKLISTS**

#### **Daily Stack Emissions Inspection**

Fabric filters (baghouses): The units that are equipped with MPCA-approved broken bag detectors are not subject to daily stack emission inspection.

Visible Emission Checklist(s):

- 1) Initials of observer;
- 2) Date and time of observation;
- 3) Indication of process and control equipment performance, either “requires attention,” or “does not require attention.” This determination is based upon an observed change in visible emission characteristics from that observed when this source and its pollution control equipment are properly operated and maintained. A change in visible emission characteristics will be indicative of “requires attention.”
- 4) Facility identification of emission unit;
- 5) Short description of emission unit.

The Permittee shall retain a central facility checklist of the following information to support the Visible Emission Checklist(s):

- 1) Description of investigation and corrective actions completed for each “requires attention” observation marked on the Visible Emission Checklist(s);
- 2) Weather conditions (air temperature, cloud cover, wind speed and direction, precipitation);
- 3) A key which will enable an inspector to cross reference the identification numbers or names used on the Visible Emission Checklist(s) to the Emission Unit (EU), Stack/Vent (SV), and Control Equipment (CE) numbers used in the Part 70 permit.

## APPENDIX B

### VISIBLE EMISSION CHECKLISTS

#### Daily Stack Emissions Inspection

Visual inspection of each stack is to be recorded on day shift Sunday through Saturday.

Record "OK" if equipment does not require attention.

Record "RA" if equipment requires attention to reduce visible emissions from the stack.

Record actions taken to remedy problems that require attention ("RA" items).

Record "Moist" if moisture plume limits visible emissions observations.

If the unit is down for more than one hour and the service area is active, notify the Environmental Engineer with the following information: Unit number, time it went down, why it went down, and when it is expected to be operating again.

At the end of each week, send completed inspection form to Environmental Engineer to file.

EU	GP	SV	Operator ID	Service Area	Sun	Mon	Tue	Wed	Thu	Fri	Sat
				Year                      Date →							
				Time →							
				Initials →							

Record corrective actions or comments for each "RA." Also record pressure drop and/or water pressure/flow for each unit that moisture plume interferes with the observation.

Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Employee \_\_\_\_\_ # \_\_\_\_\_

#### Fugitive Emission Sources

FS	Description	FS	Description
1	Surface overburden stock pile	15	"Group 13?" screened pellets stock pile
2	Unpaved road for heavy-duty vehicles	16	"Group 13?" screened fines stock pile
3	Unpaved road for secondary vehicles	17	Step I/II crude ore stock pile
6	Ballast feed rock stock pile-east pit	18	Step III crude ore stock pile
7	Ballast feed rock stock pile-west pit	20	Step II concentrate stock pile
8	Ballast product rock stock pile-east pit	21	Step III concentrate stock pile
9	Ballast product rock stock pile-west pit	22	Step I/II pellet main stock pile
10	Ballast fines rock stock pile-east pit	23	Step I/II pellet auxiliary stock pile
11	Ballast fines rock stock pile-west pit	24	Step III pellet stock pile

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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

**Subject Item:****Total Facility**

<b>What to do</b>	<b>Why to do it</b>
<b>A. OPERATIONAL REQUIREMENTS</b>	hdr
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Comply with Fugitive Emission Control Plan: The Permittee shall follow the actions and record keeping specified in the control plan. The plan will include a statement of objectives, listing and daily observation of major fugitive emission sources, operating and control measures, dust suppressant application description, corrective actions, training and records. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors as requested by the Commissioner.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2
Comply with the O & M Plan: Follow the actions and recordkeeping specified in the O & M plan. The plan may be amended by the Commissioners written approval.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
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
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
<b>B. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
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
<b>C. MONITORING REQUIREMENTS</b>	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 180 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Debugging, Troubleshooting, and Establishment of Parameter Ranges: Complete within 180 days of installation or of completion of needed repair of all monitoring equipment, including the air pollution control equipment operating at the time of Permit Issuance.	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)
Visible Emissions Check: The Permittee shall check visible emissions from the 26 selected stacks/vents, which are specified else where in this permit, once daily when in operation during daylight hours. A form meeting the requirements of Appendix B shall be used to indicate whether process or control equipment requires attention. In the event the Permittee makes a finding that attention is required, the Permittee shall investigate the process and control equipment performance and implement appropriate corrective action, if necessary.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Upon approval of the O&M Plan, the Permittee shall check visible emissions from {SVs} once daily when in operation during daylight hours. The Permittee shall used the visible emissions checklists in the O&M Plan as a means to indicate when appropriate corrective actions in the O&M Plan should be taken.	



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

<p>Fugitive Dust Observations: Prior to the approval of the Fugitive Control Plan, the Permittee shall observe fugitive dust sources {FS} once daily during daylight hours. In the event the Permittee makes a finding that attention to fugitive dust sources is required, the Permittee shall investigate the fugitive dust sources and implement corrective action, if necessary. For unpaved haul roads, the Permittee may use the existing Unpaved Haul Road Fugitive Control Plan and may submit this plan for approval as part of the overall fugitive control plan.</p> <p>Upon approval of the Fugitive Control Plan, the Permittee shall observe fugitive dust sources {FS} once daily during daylight hours in accordance with the approved plan.</p>	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
<p>Visible Emissions Training: The Permittee shall (1) ensure that one plant employee obtain an initial EPA Method 9 certification and be recertified every three years or (2) employ a similarly certified contractor. This person will train other plant employees to perform the daily visible emissions check as detailed in the O&amp;M Plan and Fugitive Control Plan.</p>	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
<b>D. RECORD KEEPING REQUIREMENTS</b>	hdr
<p>Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.</p>	Minn. R. 7007. 0800, subp. 5(B)
<p>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). Computerized formats can be used, provided that the Permittee maintains reliable backup for data retrieval.</p>	Minn. R. 7007.0800, subp. 5(C)
<p>Contractors: The Permittee shall retain records on site of all contractors that are allowed on site that include any crushers, screens and conveyors. The Permittee shall also retain records on site of all contractors whose operations would require an Air Emission Permit from the MPCA. The records shall include the contractor's company name, MPCA air emission permit number, short description of activities undertaken by the contractor, estimate of emissions or materials handled and the dates the contractor was on site. The record shall be updated at least monthly.</p> <p>The Permittee shall evaluate if the activities of any contractor required NSR permitting prior to the contractor performing such activities. If a contractor has its own permit, but it is determined that the contractor is under the common control of the taconite plant then the contractor's permit does not shield the taconite plant or the contractor from the NSR &amp; Part 70 modification regulations or enforcement actions.</p>	Minn. R. 7007.0800, subp. 2
<b>E. REPORTING REQUIREMENTS</b>	hdr
<p>Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.</p>	Minn. R. 7019.1000, subp. 1
<p>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:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	Minn. R. 7019.1000, subp. 1
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	Minn. R. 7019.1000, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
F. MISCELLANEOUS	hdr
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)
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
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
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
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
The Permittee shall not commence construction of a project without applying for and receiving a permit, if the project is subject to PSD (40 CFR 52.21) regulations.	40 CFR 52.21(i) and (r)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 001 Pre-1977 heating boilers

**Associated Items:** EU 001 SI 104 MMBtu Heating Boiler  
 EU 002 SI 104 MMBtu Heating Boiler  
 EU 003 SII 125 MMBtu Heating Boiler  
 EU 010 24.6 MMBtu Boiler  
 EU 011 24.6 MMBtu Boiler  
 SV 001 SI 104 MMBtu Boiler  
 SV 002 SI 104 MMBtu Boiler  
 SV 003 SII 125 MMBtu Boiler  
 SV 010 24.6 MMBtu Boiler  
 SV 011 24.6 MMBtu Boiler

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
B. OPERATION REQUIREMENTS	hdr
The Permittee shall record the amount of fuel oil burned each month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall analyze the oil sample to determine sulfur content of the fuel oil in ppercent by weight in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 002 Post-1977 heating boilers**Associated Items:** EU 004 SIII 153 MMBtu Heating Boiler

EU 005 SIII 153 MMBtu Heating Boiler

SV 004 SIII 153 MMBtu Boiler

SV 005 SIII 153 MMBtu Boiler

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Sulfur Dioxide: less than or equal to 2.0 lbs/million Btu heat input	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
B. OPERATION REQUIREMENTS	hdr
The Permittee shall record the amount of fuel oil burned each month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall analyze the oil sample to determine sulfur content of the fuel oil in ppercent by weight in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 003 Panfeeders (Pre-1969)****Associated Items:** CE 004 Wet Scrubber-High Efficiency w/o Lime

CE 005 Wet Scrubber-High Efficiency w/o Lime

EU 022 Step I Coarse Crusher Pan Feeders

EU 023 Step I Coarse Crusher Pan Feeders

EU 024 Step II Coarse Crusher Pan Feeders

EU 025 Step II Coarse Crusher Pan Feeders

SV 016 Step I Coarse Crusher Pan Feeders

SV 017 Step II Coarse Crusher Pan Feeders

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
<b>B. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on one stack that was not tested in the previous 60-month period to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 004 Zinc furnaces and miscellaneous ovens**

**Associated Items:** EU 028 Zinc Melt Furnace  
 EU 029 Zinc Melt Furnace  
 EU 030 Zinc Melt Furnace  
 EU 031 Zinc Melt Furnace  
 EU 032 Zinc Melt Furnace  
 EU 033 Zinc Melt Furnace  
 EU 142 Zinc Melt Furnace  
 EU 143 Zinc Melt Furnace  
 EU 389 Electric Shop Curing Oven (new)  
 EU 390 Burnout Oven  
 SV 019 Zinc Melt Furnace  
 SV 020 Zinc Melt Furnace  
 SV 086 Zinc Melt Furnace  
 SV 189 Electric Shop Curing Oven  
 SV 190 Burnout Oven

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1)
Sulfur Dioxide: less than or equal to 2 lbs/million Btu heat input	Minn. R. 7011.0610, subp. 2(B)(1)
Opacity: less than or equal to 20 percent opacity , except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
B. OPERATION REQUIREMENTS	hdr
The Permittee shall record the amount of fuel oil burned each month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall analyze the oil sample to determine sulfur content of the fuel oil in ppercent by weight in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 005 Conveyor transfer points (26A-91-I/O-1)**Associated Items:** CE 014 Wet Scrubber-High Efficiency w/o Lime

CE 015 Wet Scrubber-High Efficiency w/o Lime

EU 049 Conveyor Transfer 005 Feed

EU 050 Conveyor Transfer 005 Discharge

SV 027 Conveyor Transfer 005 Feed

SV 028 Conveyor Transfer 005 Discharge

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.02 grains/dry standard cubic foot	Title I Condition: a 1991 action that avoided major classification under 40 CFR 52.21
Particulate Matter < 10 micron: less than or equal to 0.01 grains/dry standard cubic foot	Title I Condition: a 1991 action that avoided major classification under 40 CFR 52.21
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subps. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on the stack that was not tested in the previous 60-month period to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 006 Stationary IC engines****Associated Items:** EU 006 Diesel Generator

EU 007 Diesel Generator

EU 008 Diesel Generator

EU 009 Diesel Fire Pump

EU 012 Diesel Generator

EU 051 Diesel Generator

EU 215 Diesel Generator

EU 216 Diesel Generator

EU 383 Diesel Generator

EU 384 Diesel Generator

EU 385 Diesel Generator

EU 386 Diesel Generator

EU 387 Air Compressor

SV 006 Diesel Generator

SV 007 Diesel Generator

SV 008 Diesel Generator

SV 009 Diesel Fire Pump

SV 012 Diesel Generator

SV 029 Diesel Generator

SV 098 Diesel Generator

SV 099 Diesel Generator

SV 183 Diesel Generator

SV 184 Diesel Generator

SV 185 Diesel Generator

SV 186 Diesel Generator

SV 187 Diesel Air Compressor

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input	Minn. R. 7011.2300, subp. 2
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
B. OPERATION REQUIREMENTS	hdr
The Permittee shall record the amount of diesel fuel consumed each calendar quarter. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of diesel fuel. If supplier certification is not available, the Permittee shall sample diesel fuel from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall analyze the fuel sample to determine sulfur content of diesel fuel in ppercent by weight in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 007 Coal handling sources****Associated Items:** CE 139 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 140 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

EU 367 Coal Unloading Silo

EU 368 Coal Unloading Silo

EU 369 Coal Unloading Silo

EU 370 Coal Unloading Silo

EU 371 Coal Unloading Silo

EU 372 Coal Unloading Silo

EU 373 Coal Unloading Silo

EU 374 Coal Day Bin/Conveyor Transfer

EU 375 Coal Day Bin/Conveyor Transfer

EU 376 Coal Day Bin/Conveyor Transfer

EU 377 Coal Day Bin/Conveyor Transfer

EU 378 Coal Day Bin/Conveyor Transfer

EU 379 Coal Day Bin/Conveyor Transfer

EU 380 Coal Day Bin/Conveyor Transfer

EU 381 Coal Day Bin/Conveyor Transfer

EU 382 Coal Day Bin/Conveyor Transfer

SV 181 Coal Unloading Silo

SV 182 Coal Day Bin/Conveyor Transfer

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Opacity: less than or equal to 20 percent opacity	40 CFR 60.252(c); Minn. R. 7011.1150
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for a control device a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for the stack associated with the control device in this group.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Permit Issuance on both stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 009 Agglomerator Line 3**Associated Items:** CE 086 Other

CE 088 Gravity Collector - Low Efficiency

EU 223 L3 Traveling Grate

EU 225 L3 Rotary Kiln

EU 226 L3 Pellet Cooler Secondary Air

SV 103 L3 Waste Gas Stack

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0610, subp. 1(A)(1)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency, provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 3
Sulfur Dioxide: less than or equal to 2 lbs/million Btu heat input when liquid fuel is combusted.	Minn. R. 7011.0610, subp. 2(B)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 2(A)(2)
<b>B. OPERATION REQUIREMENTS</b>	hdr
Fuel Limits: The Permittee shall combust only natural gas, Step-specific biomass, and/or fuel oil in the emission units of this group. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit. The following materials are excluded from the permitted Step-specific biomass fuel: hazardous wastes; municipal solid wastes; demolition wastes; plant cellulose materials that were contaminated; treated wood (CCA, PCP, painted, and/or stained); peat, lignite, and coal. The permitting of wood and oat hulls shall be resolved through the prospective PSD permit.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 3000 gallons/month of fuel additive for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of fuel additive usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 16000 gallons/month of slag inhibitor for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of slag inhibitor usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material/Fuel Usage and Sulfur Content: The Permittee shall record the amount of materials and fuel consumed each day. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel. The Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall sample materials entering the grate-kiln once each calendar week. The Permittee shall analyze the fuel and material samples to determine their sulfur content in percent by weight and fuel heating value in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries, material usage, and analyses results.	Minn. R. 7007.0800, subp. 4(B)
<b>C. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 365 days after Permit Issuance to measure PM, Opacity, and SO2 emissions.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Performance Test: due before end of each year following Initial Performance Test to measure PM, Opacity, and SO <sub>2</sub> emissions, if Line 3 utilization for that 12-month period is 50% or higher. (Line 3 utilization is 100%, if its kiln burner is fired for 8760 hours in the 12-month period, regardless of the rate of heat input or the rate of green ball feed.) However, Performance Test must be conducted at least ONCE for each 60 month period following Initial Performance Test.	Minn. R. 7017.2020, subp. 1
Alternative Mass Balance Determination of Sulfur Dioxide Emissions: upon approval by the MPCA, stack emissions may be calculated with Material Content and process information as outlined herein, which represent the worse case scenario for sulfur dioxide emissions. Final results, the intermediate steps, and the assumptions of this calculation shall be submitted to the MPCA.	Minn. R. 7007.0800, subp. 2; subp. 4(B)
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 010 Agglomeration Lines 4 & 5****Associated Items:** CE 101 Other

CE 102 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 103 Wet Scrubber-High Efficiency w/o Lime

CE 111 Other

CE 112 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 113 Wet Scrubber-High Efficiency w/o Lime

EU 259 L4 Traveling Grate

EU 260 L4 Recoup System Air

EU 261 L4 Rotary Kiln

EU 262 L4 Pellet Cooler Secondary Air

EU 280 L5 Traveling Grate

EU 281 L5 Recoup System Air

EU 282 L5 Rotary Kiln

EU 283 L5 Pellet Cooler Secondary Air

SV 118 L4 Waste Gas Stack

SV 127 L5 Waste Gas Stack

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Sulfur Dioxide: less than or equal to 2 lbs/million Btu heat input , if a liquid fossil fuel is burned.	Minn. R. 7011.0610, subp. 2(B)(1)
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; or, alternatively, as below:	Minn. R. 7011.0610, subp. 1(A)(1)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
B. OPERATIONAL REQUIREMENTS	hdr
Fuel Limits: The Permittee shall combust only natural gas, Step-specific biomass, and/or fuel oil in the emission units of this group. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit. The following materials are excluded from the permitted Step-specific biomass fuel: hazardous wastes; municipal solid wastes; demolition wastes; plant cellulose materials that were contaminated; treated wood (CCA, PCP, painted, and/or stained); peat, lignite, and coal. The permitting of wood and oat hulls shall be resolved through the prospective PSD permit.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 3000 gallons/month of fuel additive for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of fuel additive usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 16000 gallons/month of slag inhibitor for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of slag inhibitor usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material/Fuel Usage and Sulfur Content: The Permittee shall record the amount of materials and fuel consumed each day. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel. The Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall sample materials entering the grate-kiln once each calendar week. The Permittee shall analyze the fuel and material samples to determine their sulfur content in ppercent by weight and fuel heating value in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries, material usage, and analyses results.	Minn. R. 7007.0800, subp. 4(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

C. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
D. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on the stack that was not tested in the previous 60-month period to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure SO2 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test on the stack not tested in the last 12-month period to measure SO2 emission using EPA reference methods for performance testing. However, if the Alternative Mass Balance Determination method (next item) is used to calculate SO2 emission, the due date shall be the end of each 60 months following Initial Performance Test.	Minn. R. 7017.2020, subp. 1
Alternative Mass Balance Determination of Sulfur Dioxide Emissions: upon approval by the MPCA, stack emissions may be calculated with Material Content and process information as outlined herein, which represent the worse case scenario for sulfur dioxide emissions. A control efficiency of 50% for a wet scrubber shall be assumed for sulfur removal from the waste gas; however, this assumption shall be verified by performance testing at the MPCA's request. Final results, the intermediate steps, and the assumptions of this calculation shall be submitted to the MPCA.	Minn. R. 7007.0800, subp. 2; subp. 4(B)
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 011 Agglomeration Lines 6 & 7 (Action 007)

**Associated Items:**

- CE 123 Other
- CE 124 Gravity Collector - High Efficiency
- CE 125 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 126 Wet Scrubber-High Efficiency w/o Lime
- CE 133 Other
- CE 134 Gravity Collector - High Efficiency
- CE 135 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 136 Wet Scrubber-High Efficiency w/o Lime
- EU 313 L6 Traveling Grate
- EU 314 L6 Recoup System Air
- EU 315 L6 Rotary Kiln
- EU 316 L6 Pellet Cooler Secondary Air
- EU 332 L7 Traveling Grate
- EU 333 L7 Recoup System Air
- EU 334 L7 Rotary Kiln
- EU 335 L7 Pellet Cooler Secondary Air
- SV 144 L6 Waste Gas Stack
- SV 151 L7 Waste Gas Stack

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Carbon Monoxide: less than or equal to 99 tons/year using 12-month Rolling Sum for the combustion of wood waste (wood, wood bark, and sawdust).	Title I Condition: a 1997 action that avoided major classification under 40 CFR 52.21
Volatile Organic Compounds: less than or equal to 39 tons/year using 12-month Rolling Sum for the combustion of wood waste (wood, wood bark, and sawdust).	Title I Condition: a 1997 action that avoided major classification under 40 CFR 52.21
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; or, alternatively, as below:	Minn. R. 7011.0610, subp. 1(A)(1)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0715, subp. 3
Sulfur Dioxide: less than or equal to 2 lbs/million Btu heat input , if a liquid fossil fuel is burned; or less than or equal to 4 lbs/million Btu heat input, if a solid fossil fuel is burned.	Minn. R. 7011.0610, subp. 2(B)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
B. OPERATIONAL REQUIREMENTS	hdr
Fuel Limits: The Permittee shall combust natural gas, fuel oil, coal, and Step-specific biomass in the emission units of this group. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit. The following materials are excluded from the permitted Step-specific biomass fuel: hazardous wastes; municipal solid wastes; demolition wastes; plant cellulose materials that were contaminated; treated wood (CCA, PCP, painted, and/or stained); peat and lignite.	Minn. R. 7007.0800, subp. 2
Heating Value and Usage of Wood Waste Fuel: a representative wood waste fuel sample shall be collected and analyzed for heating value (Btu/lb) once each calendar quarter. The Permittee shall record, in tons/month, the amount of wood waste combusted in the kilns of this Group.	Title I Condition: a 1997 action that avoided major classification under 40 CFR 52.21
CO and VOC Emission Factors: a performance test for CO and VOC shall be conducted, at either one or both kilns of this Group for at least once, to generate emission factors in lbs/million Btu for purpose of emission calculation for the combustion of wood waste (wood, wood bark, and sawdust).	Title I Condition: a 1997 action that avoided major classification under 40 CFR 52.21

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Material Usage: less than or equal to 3000 gallons/month of fuel additive for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of fuel additive usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material Usage: less than or equal to 16000 gallons/month of slag inhibitor for Agglomerator Lines 3, 4, 5, 6, and 7 (Groups 9, 10, and 11) combined. The Permittee shall maintain for at least three years a monthly record of slag inhibitor usage including brands and suppliers.	Minn. R. 7007.0800, subp. 2
Material/Fuel Usage and Sulfur Content: The Permittee shall record the amount of materials and fuel consumed each day. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel. The Permittee shall sample the fuel oil from multiple the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The Permittee shall sample other fuels and materials entering the grate-kiln once each calendar week. The Permittee shall analyze the fuel and material samples to determine their sulfur content in percent by weight and fuel heating value in accordance with the current ASTM method. The Permittee shall maintain records of the fuel deliveries, material usage, and analyses results.	Minn. R. 7007.0800, subp. 4(B)
C. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
D. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on the stack that was not tested in the previous 60-month period to measure PM and PM10 emissions.	Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure SO2 emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test on the stack not tested in the last 12-month period to measure SO2 emission using EPA reference methods for performance testing. However, if the Alternative Mass Balance Determination method (next item) is used to calculate SO2 emission, the due date shall be the end of each 60 months following Initial Performance Test.	Minn. R. 7017.2020, subp. 1
Alternative Mass Balance Determination of Sulfur Dioxide Emissions: upon approval by the MPCA, stack emissions may be calculated with Material Content and process information as outlined herein, which represent the worse case scenario for sulfur dioxide emissions. A control efficiency of 50% for a wet scrubber shall be assumed for sulfur removal from the waste gas; however, this assumption shall be verified by performance testing at the MPCA's request. Final results, the intermediate steps, and the assumptions of this calculation shall be submitted to the MPCA.	Minn. R. 7007.0800, subp. 2; subp. 4(B)
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 012 Pre-1969 ore transfer around crushers

**Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 008 Wet Scrubber-High Efficiency w/o Lime

CE 009 Wet Scrubber-High Efficiency w/o Lime

CE 010 Wet Scrubber-High Efficiency w/o Lime

CE 016 Wet Scrubber-High Efficiency w/o Lime

CE 021 Wet Scrubber-High Efficiency w/o Lime

CE 022 Wet Scrubber-High Efficiency w/o Lime

CE 023 Wet Scrubber-High Efficiency w/o Lime

CE 047 Wet Scrubber-High Efficiency w/o Lime

EU 013 Step I Coarse Crusher

EU 014 Step I Coarse Crusher

EU 015 Step II Coarse Crusher

EU 016 Step II Coarse Crusher

EU 034 Conveyor Transfer 005-006

EU 035 Conveyor Transfer 005-006

EU 037 Conveyor Transfer 010-01

EU 038 Conveyor Transfer 010-01

EU 040 Conveyor Transfer 005-006

EU 052 Conveyor Transfer 008 to 009

EU 053 Conveyor Transfer 008 to 009

EU 058 Conveyor Transfer 005 to 006

EU 059 Conveyor Transfer 005 to 006

EU 060 Conveyor Transfer 005 to 006

EU 061 Conveyor Transfer 003 to 004

EU 062 Conveyor Transfer 003 to 004

EU 063 Conveyor Transfer 003 to 004

EU 064 Conveyor Transfer 003 to 004

EU 065 Tertiary Storage Bin 1-4

EU 066 Tertiary Storage Bin 1-4

EU 067 Tertiary Storage Bin 1-4

EU 102 Storage Bin 070-02

SV 013 Step I Coarse Crusher

SV 014 Step II Coarse Crusher

SV 021 Conveyor Transfer 005-006

SV 022 Conveyor Transfer 010-01

SV 023 Conveyor Transfer 005-006

SV 030 Conveyor Transfer 008-009

SV 035 Conveyor Transfer 005-006

SV 036 Conveyor Transfer 003-004

SV 037 Tertiary Storage Bins 1-4

SV 061 Storage Bin 070-02

What to do	Why to do it
A. POLLUTANT LIMITS	hdr



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate for Wet Scrubbers: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) for SV 013 (CE 001) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for CE 001 a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for SV 013.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on one stack that was not tested in the previous 60-month period to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 013 Post-1969 ore transfer around crushers

**Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 006 Wet Scrubber-High Efficiency w/o Lime

CE 007 Wet Scrubber-High Efficiency w/o Lime

CE 009 Wet Scrubber-High Efficiency w/o Lime

CE 011 Wet Scrubber-High Efficiency w/o Lime

CE 012 Wet Scrubber-High Efficiency w/o Lime

CE 013 Wet Scrubber-High Efficiency w/o Lime

CE 023 Wet Scrubber-High Efficiency w/o Lime

CE 040 Wet Scrubber-High Efficiency w/o Lime

EU 017 Step III Coarse Crusher & Lime Dump

EU 018 Step III Coarse Crusher & Lime Dump

EU 019 Step III Coarse Crusher & Lime Dump

EU 020 Step III Coarse Crusher & Lime Dump

EU 026 Step III Coarse Crusher Pan Feeders & Lime Transfer

EU 027 Step III Coarse Crusher Pan Feeders & Lime Transfer

EU 036 Conveyor Transfer 010-01

EU 039 Conveyor Transfer 010-01

EU 041 Conveyor Transfer 004-005

EU 042 Conveyor Transfer 004-005

EU 043 Conveyor Transfer 004-005

EU 044 Conveyor Transfer 004-005

EU 045 Conveyor Transfer 004-005

EU 046 Conveyor Transfer 004-005

EU 047 Conveyor Transfer 011-02/03

EU 048 Surge Pile/Reclaim 011-01

EU 068 Tertiary Storage Bin 1-4

EU 085 Tertiary Crusher 080 Bins 5-8

EU 086 Tertiary Crusher 080 Bins 5-8

EU 087 Tertiary Crusher 080 Bins 5-8

EU 088 Tertiary Crusher 080 Bins 5-8

EU 089 Tertiary Crusher 080 Bins 5-8

EU 090 Tertiary Crusher 080 Bins 5-8

EU 091 Tertiary Crusher 080 Bins 5-8

EU 092 Tertiary Crusher 080 Bins 5-8

SV 015 Step III Coarse Crusher

SV 018 Step III Coarse Crusher Pan Feeders

SV 022 Conveyor Transfer 010-01

SV 024 Conveyor Transfer 004-005

SV 025 Conveyor Transfer 011-02/03

SV 026 Surge Pile/Reclaim 011-01

SV 037 Tertiary Storage Bins 1-4

SV 054 Tertiary Crusher 080 5-8 Bins

What to do	Why to do it
A. POLLUTANT LIMITS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>B. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate for Wet Scrubbers: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) for SV 014 (CE 002) and SV 015 (CE 003) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for a control device a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for the stack associated with the control device in this group.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after Permit Issuance on SV 054 and another stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on one stack that was not tested in the previous 60-month period to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 014 Pre-1969 secondary crushers****Associated Items:** CE 017 Wet Scrubber-High Efficiency w/o Lime

CE 018 Wet Scrubber-High Efficiency w/o Lime

CE 019 Wet Scrubber-High Efficiency w/o Lime

CE 020 Wet Scrubber-High Efficiency w/o Lime

EU 054 Secondary Crusher L1

EU 055 Secondary Crusher L2

EU 056 Secondary Crusher L3

EU 057 Secondary Crusher L4

SV 031 Secondary Crusher L1

SV 032 Secondary Crusher L2

SV 033 Secondary Crusher L3

SV 034 Secondary Crusher L4

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Permit Issuance on one stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 015 Pre-1969 tertiary crushers**

**Associated Items:**

- CE 024 Wet Scrubber-High Efficiency w/o Lime
- CE 025 Wet Scrubber-High Efficiency w/o Lime
- CE 026 Wet Scrubber-High Efficiency w/o Lime
- CE 027 Wet Scrubber-High Efficiency w/o Lime
- CE 028 Wet Scrubber-High Efficiency w/o Lime
- CE 029 Wet Scrubber-High Efficiency w/o Lime
- EU 069 Tertiary Crusher L1
- EU 070 Tertiary Crusher L2
- EU 071 Tertiary Crusher L3
- EU 072 Tertiary Crusher L4
- EU 073 Tertiary Crusher L5
- EU 074 Tertiary Crusher L6
- SV 038 Tertiary Crusher L1
- SV 039 Tertiary Crusher L2
- SV 040 Tertiary Crusher L3
- SV 041 Tertiary Crusher L4
- SV 042 Tertiary Crusher L5
- SV 043 Tertiary Crusher L6

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 016 Post-1969 secondary crushers

**Associated Items:**

- CE 041 Wet Scrubber-High Efficiency w/o Lime
- CE 042 Wet Scrubber-High Efficiency w/o Lime
- CE 043 Wet Scrubber-High Efficiency w/o Lime
- CE 044 Wet Scrubber-High Efficiency w/o Lime
- CE 045 Wet Scrubber-High Efficiency w/o Lime
- CE 048 Wet Scrubber-High Efficiency w/o Lime
- CE 050 Wet Scrubber-High Efficiency w/o Lime
- CE 051 Wet Scrubber-High Efficiency w/o Lime
- CE 052 Wet Scrubber-High Efficiency w/o Lime
- CE 053 Wet Scrubber-High Efficiency w/o Lime
- CE 054 Wet Scrubber-High Efficiency w/o Lime
- EU 093 Secondary Crusher L6
- EU 094 Secondary Crusher L7
- EU 095 Secondary Crusher L8
- EU 096 Secondary Crusher L9
- EU 097 Secondary Crusher L10
- EU 103 Secondary Crusher L5
- EU 106 Secondary Crusher L11
- EU 107 Secondary Crusher L12
- EU 108 Secondary Crusher L13
- EU 109 Secondary Crusher L14
- EU 110 Secondary Crusher L15
- SV 055 Secondary Crusher L6
- SV 056 Secondary Crusher L7
- SV 057 Secondary Crusher L8
- SV 058 Secondary Crusher L9
- SV 059 Secondary Crusher L10
- SV 062 Secondary Crusher L5
- SV 064 Secondary Crusher L11
- SV 065 Secondary Crusher L12
- SV 066 Secondary Crusher L13
- SV 067 Secondary Crusher L14
- SV 068 Secondary Crusher L15

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Gas Stream Pressure Drop: M Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 017 Post-1969 ore transfer for fine crushers

**Associated Items:** CE 046 Wet Scrubber-High Efficiency w/o Lime  
CE 049 Wet Scrubber-High Efficiency w/o Lime  
CE 055 Wet Scrubber-High Efficiency w/o Lime  
CE 056 Wet Scrubber-High Efficiency w/o Lime  
CE 057 Wet Scrubber-High Efficiency w/o Lime  
CE 058 Wet Scrubber-High Efficiency w/o Lime  
CE 071 Wet Scrubber-High Efficiency w/o Lime  
EU 098 Conveyor Transfer 008 to 009  
EU 099 Conveyor Transfer 008 to 009  
EU 100 Conveyor Transfer 008 to 009  
EU 101 Conveyor Transfer 008 to 009  
EU 104 Conveyor Transfer 008-009  
EU 105 Conveyor Transfer 008-009  
EU 111 Conveyor Transfer 001-070 Bin  
EU 112 Conveyor Transfer 003  
EU 113 Conveyor Transfer 003  
EU 114 Conveyor Transfer 003-004  
EU 115 Conveyor Transfer 003-004  
EU 116 Tertiary Storage 006-080 Bin  
EU 117 Tertiary Storage 006-080 Bin  
EU 118 Tertiary Storage 006-080 Bin  
EU 119 Tertiary Storage 006-080 Bin  
EU 120 Tertiary Storage 006-080 Bin  
EU 121 Tertiary Storage 006-080 Bin  
EU 122 Tertiary Storage 006-080 Bin  
EU 123 Tertiary Storage 006-080 Bin  
EU 124 Tertiary Storage 006-080 Bin  
EU 125 Tertiary Storage 006-080 Bin  
EU 126 Tertiary Storage 006-080 Bin  
EU 127 Tertiary Storage 006-080 Bin  
EU 140 Conveyor Transfer 005-006  
EU 141 Conveyor Transfer 005-006  
SV 060 Conveyor Transfer 008-009  
SV 063 Conveyor Transfer 008-009  
SV 069 Conveyor Transfer 001-070 Bin  
SV 070 Conveyor Transfer 003  
SV 071 Conveyor Transfer 003-004  
SV 072 Tertiary Storage 006-080 Bins  
SV 085 Conveyor Transfer 005-006

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Monitor and record as least once every day when in operation, once the pressure gauge is installed for each piece of control equipment in this group. Complete pressure drop monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Monitor and record as least once every day when in operation, once the monitoring equipment is installed for each piece of wet scrubbers in this group. Complete monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on two stacks to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on two stacks that were not tested in the previous 60-month period to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 018 Post-1969 tertiary crushers**

**Associated Items:** CE 030 Wet Scrubber-High Efficiency w/o Lime  
CE 031 Wet Scrubber-High Efficiency w/o Lime  
CE 032 Wet Scrubber-High Efficiency w/o Lime  
CE 033 Wet Scrubber-High Efficiency w/o Lime  
CE 034 Wet Scrubber-High Efficiency w/o Lime  
CE 035 Wet Scrubber-High Efficiency w/o Lime  
CE 036 Wet Scrubber-High Efficiency w/o Lime  
CE 037 Wet Scrubber-High Efficiency w/o Lime  
CE 038 Wet Scrubber-High Efficiency w/o Lime  
CE 039 Wet Scrubber-High Efficiency w/o Lime  
CE 059 Wet Scrubber-High Efficiency w/o Lime  
CE 060 Wet Scrubber-High Efficiency w/o Lime  
CE 061 Wet Scrubber-High Efficiency w/o Lime  
CE 062 Wet Scrubber-High Efficiency w/o Lime  
CE 063 Wet Scrubber-High Efficiency w/o Lime  
CE 064 Wet Scrubber-High Efficiency w/o Lime  
CE 065 Wet Scrubber-High Efficiency w/o Lime  
CE 066 Wet Scrubber-High Efficiency w/o Lime  
CE 067 Wet Scrubber-High Efficiency w/o Lime  
CE 068 Wet Scrubber-High Efficiency w/o Lime  
CE 069 Wet Scrubber-High Efficiency w/o Lime  
CE 070 Wet Scrubber-High Efficiency w/o Lime  
EU 075 Tertiary Crusher L7  
EU 076 Tertiary Crusher L8  
EU 077 Tertiary Crusher L9  
EU 078 Tertiary Crusher L10  
EU 079 Tertiary Crusher L11  
EU 080 Tertiary Crusher L12  
EU 081 Tertiary Crusher L13  
EU 082 Tertiary Crusher L14  
EU 083 Tertiary Crusher L15  
EU 084 Tertiary Crusher L16  
EU 128 Tertiary Crusher L18  
EU 129 Tertiary Crusher L19  
EU 130 Tertiary Crusher L20  
EU 131 Tertiary Crusher L21  
EU 132 Tertiary Crusher L22  
EU 133 Tertiary Crusher L23  
EU 134 Tertiary Crusher L24  
EU 135 Tertiary Crusher L25  
EU 136 Tertiary Crusher L26  
EU 137 Tertiary Crusher L27  
EU 138 Tertiary Crusher L28  
EU 139 Tertiary Crusher L29  
SV 044 Tertiary Crusher L7

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Associated Items:**

- SV 045 Tertiary Crusher L8
- SV 046 Tertiary Crusher L9
- SV 047 Tertiary Crusher L10
- SV 048 Tertiary Crusher L11
- SV 049 Tertiary Crusher L12
- SV 050 Tertiary Crusher L13
- SV 051 Tertiary Crusher L14
- SV 052 Tertiary Crusher L15
- SV 053 Tertiary Crusher L16
- SV 073 Tertiary Crusher L18
- SV 074 Tertiary Crusher L19
- SV 075 Tertiary Crusher L20
- SV 076 Tertiary Crusher L21
- SV 077 Tertiary Crusher L22
- SV 078 Tertiary Crusher L23
- SV 079 Tertiary Crusher L24
- SV 080 Tertiary Crusher L25
- SV 081 Tertiary Crusher L26
- SV 082 Tertiary Crusher L27
- SV 083 Tertiary Crusher L28
- SV 084 Tertiary Crusher L29

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on three stacks to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on two stacks that were not tested in the previous 60-month period to measure PM emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 019 Pre-1969 ore transfer to bins

**Associated Items:** CE 073 Wet Scrubber-High Efficiency w/o Lime  
CE 074 Wet Scrubber-High Efficiency w/o Lime  
CE 075 Wet Scrubber-High Efficiency w/o Lime  
EU 144 Conveyor Transfer 009-020  
EU 145 Conveyor Transfer 009-020  
EU 148 Storage Bin L1,2  
EU 149 Storage Bin L1,2  
EU 150 Storage Bin L1,2  
EU 151 Storage Bin L1,2  
EU 152 Storage Bin L1,2  
EU 153 Storage Bin L1,2  
EU 154 Storage Bin L1,2  
EU 155 Storage Bin L3,4  
EU 156 Storage Bin L3,4  
EU 157 Storage Bin L3,4  
EU 158 Storage Bin L3,4  
EU 159 Storage Bin L3,4  
EU 160 Storage Bin L3,4  
EU 161 Storage Bin L3,4  
EU 162 Storage Bin L5,6  
EU 163 Storage Bin L5,6  
EU 164 Storage Bin L5,6  
EU 165 Storage Bin L5,6  
EU 166 Storage Bin L5,6  
EU 167 Storage Bin L5,6  
EU 168 Storage Bin L5,6  
SV 088 Storage Bin L1, 2  
SV 089 Storage Bin L3, 4  
SV 090 Storage Bin L5, 6

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Permit Issuance on two stacks to measure PM emission, and on all stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 020 Post-1969 ore transfer to bins**

**Associated Items:** CE 072 Wet Scrubber-High Efficiency w/o Lime  
CE 076 Wet Scrubber-High Efficiency w/o Lime  
CE 077 Wet Scrubber-High Efficiency w/o Lime  
CE 078 Wet Scrubber-High Efficiency w/o Lime  
CE 079 Wet Scrubber-High Efficiency w/o Lime  
CE 080 Wet Scrubber-High Efficiency w/o Lime  
CE 081 Wet Scrubber-High Efficiency w/o Lime  
CE 082 Wet Scrubber-High Efficiency w/o Lime  
EU 146 Conveyor Transfer 009-020  
EU 147 Conveyor Transfer 009-020  
EU 169 Storage Bin L7,8  
EU 170 Storage Bin L7,8  
EU 171 Storage Bin L7,8  
EU 172 Storage Bin L7,8  
EU 173 Storage Bin L7,8  
EU 174 Storage Bin L7,8  
EU 175 Storage Bin L7,8  
EU 176 Storage Bin L9,10  
EU 177 Storage Bin L9,10  
EU 178 Storage Bin L9,10  
EU 179 Storage Bin L9,10  
EU 180 Storage Bin L9,10  
EU 181 Storage Bin L9,10  
EU 182 Storage Bin L9,10  
EU 183 Storage Bin L11,12  
EU 184 Storage Bin L11,12  
EU 185 Storage Bin L11,12  
EU 186 Storage Bin L11,12  
EU 187 Storage Bin L11,12  
EU 188 Storage Bin L11,12  
EU 189 Storage Bin L11,12  
EU 190 Conveyor Transfer 009-020  
EU 191 Conveyor Transfer 009-020  
EU 192 Conveyor Transfer 009-020  
EU 193 Conveyor Transfer 009-020  
EU 194 Storage Bin L13,14  
EU 195 Storage Bin L13,14  
EU 196 Storage Bin L13,14  
EU 197 Storage Bin L13,14  
EU 198 Storage Bin L13,14  
EU 199 Storage Bin L13,14  
EU 200 Storage Bin L13,14  
EU 201 Storage Bin L15,16  
EU 202 Storage Bin L15,16  
EU 203 Storage Bin L15,16

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Associated Items:**

- EU 204 Storage Bin L15,16
- EU 205 Storage Bin L15,16
- EU 206 Storage Bin L15,16
- EU 207 Storage Bin L15,16
- EU 208 Storage Bin L17,18
- EU 209 Storage Bin L17,18
- EU 210 Storage Bin L17,18
- EU 211 Storage Bin L17,18
- EU 212 Storage Bin L17,18
- EU 213 Storage Bin L17,18
- EU 214 Storage Bin L17,18
- SV 087 Conveyor Transfer 009-020
- SV 091 Storage Bin L7, 8
- SV 092 Storage Bin L9, 10
- SV 093 Storage Bin L11, 12
- SV 094 Conveyor Transfer 009-020
- SV 095 Storage Bin L13, 14
- SV 096 Storage Bin L15, 16
- SV 097 Storage Bin L17, 18

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>B. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after Permit Issuance on two stacks to measure PM emission, and on all stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test on two stacks that were not tested in the previous 60-month period to measure PM emission, and on all stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 021 Pre-1969 mixing & pellet handling for Step I

**Associated Items:** CE 083 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 084 Wet Scrubber-High Efficiency w/o Lime

CE 085 Wet Scrubber-High Efficiency w/o Lime

CE 089 Wet Scrubber-High Efficiency w/o Lime

CE 090 Wet Scrubber-High Efficiency w/o Lime

CE 091 Wet Scrubber-High Efficiency w/o Lime

CE 092 Wet Scrubber-High Efficiency w/o Lime

EU 217 L3 Bentonite Blending

EU 218 L3 Bentonite Blending

EU 219 L3 Bentonite Blending

EU 220 L3 Bentonite Blending

EU 221 L3 Grate Feed

EU 222 L3 Grate Discharge

EU 228 L3 Cooler Discharge

EU 229 L3 Feeder 041/046 Belts

EU 230 L3 041/046 Conveyor Belt Vent

EU 231 L3 041/046 Conveyor Belt Vent

EU 232 S1 Conveyor Transfer 042-043

EU 233 S1 Conveyor Transfer 042-043

EU 234 L3 Conveyor Transfer 041-042

EU 235 L3 Conveyor Transfer 041-042

SV 100 Bentonite Blending Collector

SV 101 L3 Grate Feed

SV 102 L3 Grate Discharge

SV 105 L3 Cooler Dump Zone

SV 106 L3 Feeder 041, 046 Belts

SV 107 L3 041/046 Conveyor Belt Vent

SV 108 S1 Conveyor Transfer 042-043

SV 109 L1 Conveyor Transfer 041-042

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Monitor and record as least once every day when in operation, once the pressure gauge is installed for each piece of control equipment in this group. Complete pressure drop monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Liquid Flow Rate for Wet Scrubbers: Monitor and record as least once every day when in operation, once the monitoring equipment is installed for each piece of wet scrubbers in this group. Complete monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) for SV 100 (CE 083) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for CE 083 a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for SV 100.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on SV 105 and another stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 022 Post-1969 cooler vent stacks for Steps II & III

**Associated Items:** EU 263 L4 Pellet Cooler Vent Stack  
 EU 284 L5 Pellet Cooler Vent Stack  
 EU 397 L6 Pellet Cooler Vent Stack  
 EU 398 L7 Pellet Cooler Vent Stack  
 SV 119 L4 Cooler Vent Stack  
 SV 128 L5 Cooler Vent Stack  
 SV 196 L6 Pellet Cooler Stack  
 SV 197 L7 Pellet Cooler Stack

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. OPERATION REQUIREMENTS	hdr
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on all stacks to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test on all stacks to measure PM and Opacity emissions. After at least three years of performance testing data are submitted, the Permittee may request that future testing be scheduled according to a test frequency plan proposed based on submitted testing data.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 023 Pre-1969 bentonite equipment

**Associated Items:** CE 093 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 094 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 095 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
EU 236 S1 Bentonite Storage Bin  
EU 237 S1 Bentonite Storage Bin  
EU 238 S1 Bentonite Storage Bin  
EU 239 L2,3 Bentonite Day Bin  
EU 240 L2,3 Bentonite Day Bin  
EU 241 L2,3 Bentonite Day Bin  
EU 242 L2,3 Bentonite Day Bin  
EU 243 S1,2 Bentonite Unloading  
SV 110 S1 Bentonite Storage Bin  
SV 111 L2, 3 Bentonite Day Bin  
SV 112 S1, 2 Bentonite Unloading

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Monitor and record as least once every day when in operation, once the pressure gauge is installed for each piece of control equipment in this group. Complete pressure drop monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for a control device a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for the stack associated with the control device in this group.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM emission, and on all stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac  
 Permit Number: 13700005 - 001

**Subject Item:** GP 024 Post-1969 bentonite equipment

**Associated Items:** CE 096 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 097 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 107 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 118 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 119 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 129 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 142 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 EU 244 S2 Bentonite Storage Bin  
 EU 245 S2 Bentonite Storage Bin  
 EU 246 S2 Bentonite Storage Bin  
 EU 247 L4 Bentonite Day Bins  
 EU 248 L4 Bentonite Day Bins  
 EU 249 L4 Bentonite Day Bins  
 EU 250 L4 Bentonite Day Bins  
 EU 251 L4 Bentonite Day Bins  
 EU 268 L5 Bentonite Day Bins  
 EU 269 L5 Bentonite Day Bins  
 EU 270 L5 Bentonite Day Bins  
 EU 271 L5 Bentonite Day Bins  
 EU 272 L5 Bentonite Day Bins  
 EU 297 S3 Bentonite Storage  
 EU 298 S3 Bentonite Storage  
 EU 299 S3 Bentonite Storage  
 EU 300 S3 Ben storage+unloading hopper  
 EU 301 L6 Bentonite Day Bin  
 EU 302 L6 Bentonite Day Bin  
 EU 303 L6 Bentonite Day Bin  
 EU 304 L6 Bentonite Day Bin  
 EU 305 L6 Bentonite Day Bin  
 EU 320 L7 Bentonite Day Bin  
 EU 321 L7 Bentonite Day Bin  
 EU 322 L7 Bentonite Day Bin  
 EU 323 L7 Bentonite Day Bin  
 EU 324 L7 Bentonite Day Bin  
 SV 113 S2 Bentonite Storage Bin  
 SV 114 L4 Bentonite Day Bin  
 SV 123 L5 Bentonite Day Bin  
 SV 139 S3 Bentonite Storage  
 SV 140 L6 Bentonite Day Bin  
 SV 147 L7 Bentonite Day Bin  
 SV 193 Step III Bentonite Storage Baghouse

What to do	Why to do it
A. POLLUTANT LIMITS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for a control device a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for the stack associated with the control device in this group.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack to measure PM emission, and on all stacks to measure Opacity emission.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: GP 025 Post-1969 mixers for Steps II & III****Associated Items:** CE 098 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 099 Wet Scrubber-High Efficiency w/o Lime

CE 100 Wet Scrubber-High Efficiency w/o Lime

CE 108 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 109 Wet Scrubber-High Efficiency w/o Lime

CE 110 Wet Scrubber-High Efficiency w/o Lime

CE 120 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 121 Wet Scrubber-High Efficiency w/o Lime

CE 122 Wet Scrubber-High Efficiency w/o Lime

CE 130 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 131 Wet Scrubber-High Efficiency w/o Lime

CE 132 Wet Scrubber-High Efficiency w/o Lime

EU 252 L4 Bentonite Blending

EU 253 L4 Bentonite Blending

EU 254 L4 Bentonite Blending

EU 255 L4 Bentonite Blending

EU 256 L4 Bentonite Blending

EU 257 L4 Grate Feed

EU 258 L4 Grate Discharge

EU 273 L5 Bentonite Blending

EU 274 L5 Bentonite Blending

EU 275 L5 Bentonite Blending

EU 276 L5 Bentonite Blending

EU 277 L5 Bentonite Blending

EU 278 L5 Grate Feed

EU 279 L5 Grate Discharge

EU 306 L6 Bentonite Blending

EU 307 L6 Bentonite Blending

EU 308 L6 Bentonite Blending

EU 309 L6 Bentonite Blending

EU 310 L6 Bentonite Blending

EU 311 L6 Grate Feed

EU 312 L6 Grate Discharge

EU 325 L7 Bentonite Blending

EU 326 L7 Bentonite Blending

EU 327 L7 Bentonite Blending

EU 328 L7 Bentonite Blending

EU 329 L7 Bentonite Blending

EU 330 L7 Grate Feed

EU 331 L7 Grate Discharge

SV 115 L4 Bentonite Blending

SV 116 L4 Grate Feed

SV 117 L4 Grate Discharge

SV 124 L5 Bentonite Blending

SV 125 L5 Grate Feed

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Associated Items:**

- SV 126 L5 Grate Discharge
- SV 141 L6 Bentonite Blending
- SV 142 L6 Grate Feed
- SV 143 L6 Grate Discharge
- SV 148 L7 Bentonite Blending
- SV 149 L7 Grate Feed
- SV 150 L7 Grate Discharge

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>B. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Monitor and record as least once every day when in operation, once the pressure gauge is installed for each piece of control equipment in this group. Complete pressure drop monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate for Wet Scrubbers: Monitor and record as least once every day when in operation, once the monitoring equipment is installed for each piece of wet scrubbers in this group. Complete monitoring equipment debugging, trouble-shooting, and establishment of parameter range within 180 days of installation.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) for SV 115, SV 124, SV 141, and SV 148 once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for a fabric filter (CE 098, CE 108, CE 120, or CE 130) a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for the stack controlled by that fabric filter (SV 115, SV 124, SV 141, or SV 148, respectively).	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after Permit Issuance on one stack from (SV 116, 117, 125, 126, 142, 143, 149, or 150) and another stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

# TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 026 Post-1969 pellet handling for Steps II & III

**Associated Items:**

- CE 104 Wet Scrubber-High Efficiency w/o Lime
- CE 105 Wet Scrubber-High Efficiency w/o Lime
- CE 106 Wet Scrubber-High Efficiency w/o Lime
- CE 114 Wet Scrubber-High Efficiency w/o Lime
- CE 115 Wet Scrubber-High Efficiency w/o Lime
- CE 116 Wet Scrubber-High Efficiency w/o Lime
- CE 117 Wet Scrubber-High Efficiency w/o Lime
- CE 127 Wet Scrubber-High Efficiency w/o Lime
- CE 137 Wet Scrubber-High Efficiency w/o Lime
- EU 264 L4 Conveyor Transfer Feeder
- EU 265 L4 Cooler Discharge
- EU 266 L4 Conveyor Transfer 041/046 to 042 Belts
- EU 267 L4 Conveyor Transfer 041/046 to 042 Belts
- EU 285 L5 Conveyor Transfer Feeder (B4 L5 hygiene)
- EU 286 L5 Cooler Discharge
- EU 287 L5 Conveyor Transfer 041/046 to 042 Belts
- EU 288 L5 Conveyor Transfer 041/046 to 042 Belts
- EU 295 S3 Conveyor Transfer
- EU 296 S3 Conveyor Transfer
- EU 317 L6 Pellet Cooler Vent
- EU 318 L6 Conveyor Transfer
- EU 319 L6 Conveyor Transfer
- EU 336 L7 Pellet Cooler Vent
- EU 337 L7 Conveyor Transfer
- EU 338 L7 Conveyor Transfer
- EU 339 Step I 043/044 Conveyor Transfer
- EU 340 Step I 043/044 Conveyor Transfer
- EU 399 L4 Pellet Scrn Fine Belt
- EU 400 L5 Pellet Scrn Fine Belt
- SV 120 L4 Conveyor Transfer Feeder
- SV 121 L4 Cooler Dump Zone
- SV 122 L4 Conveyor Transfer 041-046 to 042 Belts
- SV 129 L5 Conveyor Transfer Feeder
- SV 130 L5 Cooler Dump Zone
- SV 131 L5 Conveyor Transfer 041-046 to 042 Belts
- SV 138 S3 Conveyor Transfer
- SV 145 L6 Pellet Cooler Dump Zone
- SV 146 L6 Conveyor Transfer
- SV 152 L7 Pellet Cooler Dump Zone
- SV 153 L7 Conveyor Transfer
- SV 154 Step I 043/044 Conv. Trans
- SV 155 Step I 043/044 Conv. Trans

What to do	Why to do it
A. POLLUTANT LIMITS	hdr



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

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; or, alternatively, as below:	Minn. R. 7011.0715, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency , provided that the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. CONTROL EQUIPMENT MONITORING	hdr
Gas Stream Pressure Drop: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Liquid Flow Rate: Upon installation of monitoring equipment, monitor and record at least once every day when in operation. Once the operating range is established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one stack from (SV 121, 130, 145, or 152) and another stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac  
Permit Number: 13700005 - 001

**Subject Item: GP 027 Post-1969 conveyors without APCE**

**Associated Items:**

- EU 289 Step I 043 Conveyor Vents
- EU 290 Step I 043 Conveyor Vents
- EU 291 Step I 043 Conveyor Vents
- EU 292 Step I 043 Conveyor Vents
- EU 293 Step I 043 Conveyor Vents
- EU 294 Step I 043 Conveyor Vents
- EU 341 Step III 042 Conveyor Vent
- EU 342 Step III 042 Conveyor Vent
- EU 343 Step III 043 Conveyor Vent
- EU 344 Step III 043 Conveyor Vent
- EU 345 Step III 044 Conveyor Vent
- EU 346 Step III 044 Conveyor Vent
- EU 347 Step III 044 Conveyor Vent
- EU 348 Step III 044 Conveyor Vent
- EU 349 Step III 044 Conveyor Vent
- EU 350 Step III 044 Conveyor Vent
- EU 351 Step III 044 Conveyor Vent
- EU 352 Step III 044 Conveyor Vent
- EU 353 Step III 044 Conveyor Vent
- EU 354 Step III 044 Conveyor Vent
- EU 355 Step III 044 Conveyor Vent
- EU 356 Step III 044 Conveyor Vent
- EU 357 Step III 044 Conveyor Vent
- EU 358 Step III 044 Conveyor Vent
- EU 359 Step III 043/044 Conveyor Transfer
- EU 360 Step III 043/044 Conveyor Transfer
- EU 361 Step III 043/044 Conveyor Transfer
- EU 362 Step III 043/044 Conveyor Transfer
- EU 363 Step III 044-6/044-7 Conveyor Transfer
- EU 364 Step III 044-6/044-7 Conveyor Transfer
- EU 365 Step III 044-6/044-7 Conveyor Transfer
- EU 366 Step III Pellet Loadout
- SV 132 Step I 043 Conveyor Vents
- SV 133 Step I 043 Conveyor Vents
- SV 134 Step I 043 Conveyor Vents
- SV 135 Step I 043 Conveyor Vents
- SV 136 Step I 043 Conveyor Vents
- SV 137 Step I 043 Conveyor Vents
- SV 156 Step III 042 Conveyor Vent
- SV 157 Step III 042 Conveyor Vent
- SV 158 Step III 043 Conveyor Vent
- SV 159 Step III 043 Conveyor Vent
- SV 160 Step III 044 Conveyor Vent
- SV 161 Step III 044 Conveyor Vent
- SV 162 Step III 044 Conveyor Vent

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Associated Items:**

- SV 163 Step III 044 Conveyor Vent
- SV 164 Step III 044 Conveyor Vent
- SV 165 Step III 044 Conveyor Vent
- SV 166 Step III 044 Conveyor Vent
- SV 167 Step III 044 Conveyor Vent
- SV 168 Step III 044 Conveyor Vent
- SV 169 Step III 044 Conveyor Vent
- SV 170 Step III 044 Conveyor Vent
- SV 171 Step III 044 Conveyor Vent
- SV 172 Step III 044 Conveyor Vent
- SV 173 Step III 044 Conveyor Vent
- SV 174 Step III 043/044 Conveyor Transfer
- SV 175 Step III 043/044 Conveyor Transfer
- SV 176 Step III 043/044 Conveyor Transfer
- SV 177 Step III 043/044 Conveyor Transfer
- SV 178 Step III 044-6/044-7 Conveyor Transfer
- SV 179 Step III 044-6/044-7 Conveyor Transfer
- SV 180 Step III Pellet Loadout

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 028 Limestone handling (Actions 007 & 008)

**Associated Items:** CE 070 Wet Scrubber-High Efficiency w/o Lime  
 CE 143 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 EU 393 Limestone Dump Pocket  
 EU 394 Limestone conveyer trnsfr 1  
 EU 395 Limestone conveyer trnsfr 2  
 SV 084 Tertiary Crusher L29  
 SV 194 Limestone Receiving System

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.022 grains/dry standard cubic foot (0.05 grams per dry standard cubic meter).	40 CFR 60.672(a)(1)
Opacity: less than or equal to 7 percent opacity for SV 194, which is controlled by CE 143 (the fabric filter for limestone receiving system dump pocket & transfer point no. 1).	40 CFR 60.672(a)(2)
<b>B. CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Pressure Drop: greater than or equal to 3.2 inches of water column and less than or equal to 5.7 inches of water column for CE 070 (wet scrubber) that controls SV 084 for EU 395 (limestone receiving system transfer point no. 2).	Title I Condition: a 1997&2000 action that avoided review under CFR 52.21 set this
Pressure Drop: greater than or equal to 0.5 inches of water column and less than or equal to 8.0 inches of water column for CE 143 (fabric filter) that controls SV 194 for EU 393 & EU 394 (limestone receiving system dump pocket & transfer point no. 1).	Title I Condition: a 1997&2000 action that avoided review under CFR 52.21 set this
Liquid Flow Rate: greater than or equal to 25 gallons/minute and less than or equal to 45 gallons/minute for CE 070 (wet scrubber) that controls SV 084 for EU 395 (limestone receiving system transfer point no. 2).	Title I Condition: a 1997&2000 action that avoided review under CFR 52.21 set this
<b>C. CONTROL EQUIPMENT MONITORING</b>	hdr
Gas Stream Pressure Drop: Monitor and record as least once every day when in operation for CE 070 and CE 143.	Title I Condition: a 1997&2000 action that avoided review under CFR 52.21 set this
Liquid Flow Rate: Monitor and record as least once every day when in operation for CE 070.	Title I Condition: a 1997&2000 action that avoided review under CFR 52.21 set this
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) for SV 194 once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses for CE 143 a broken bag detector approved by the MPCA, the Permittee does not need to conduct visible emissions checks for SV 194.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 365 days after Permit Issuance on one stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** SV 104 L3 Cooler Vent Stack**Associated Items:** EU 227 L3 Cooler Vent Stack

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, 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)
B. OPERATION REQUIREMENTS	hdr
Process Monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure PM and Opacity, if Line 3 utilization for that 12-month period is 50% or higher. (Line 3 utilization is 100%, if its kiln burner is fired for 8760 hours in the 12-month period, regardless of the rate of heat input or the rate of green ball feed.) However, Performance Test must be conducted at least ONCE for each 60 month period following Initial Performance Test.	Minn. R. 7017.2020, subp. 1
Performance Test Pre-test Meeting: due 7 days before Performance Test	Minn. R. 7017.2030, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item: SV 122 L4 Conveyor Transfer 041-046 to 042 Belts**

**Associated Items:** EU 264 L4 Conveyor Transfer Feeder  
 EU 266 L4 Conveyor Transfer 041/046 to 042 Belts  
 EU 267 L4 Conveyor Transfer 041/046 to 042 Belts  
 EU 399 L4 Pellet Scrn Fine Belt  
 GP 026 Post-1969 pellet handling for Steps II & III

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.05 grams/dry standard cubic meter (0.022 grains/dry standard cubic foot) of exhaust gas on and after the date on which the performance test required is completed.	40 CFR 60.382(a); Minn. R. 7011.2700
Opacity: less than or equal to 10 percent opacity using 6-minute average for any process fugitive emissions on and after the 60th day after achieving the maximum production rate at which EU 399 and the screen at EU 264 will be operated, but not later than 180 days after the initial startup of EU 399 and the screen at EU 264.	40 CFR 60.382(b); Minn. R. 7011.2700
<b>B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Gas Stream Pressure Drop: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE 106) for the continuous measurement of the change in pressure of the gas stream through the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 250 Pascals (1 inch water) gauge pressure, plus or minus; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(a); Minn. R. 7011.2700
Liquid Flow Rate: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE106) for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 5%, plus or minus, of design scrubbing liquid flow rate; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(b); Minn. R. 7011.2700
Record Gas Stream Pressure Drop and Liquid Flow Rate for CE 106 each day in operation.	Minn. R. 7011.0800
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 60 days after achieving maximum capacity, but not later than 180 days after initial startup of the affected facility (EU 399 and the screen at EU 264) to determine Total Particulate Matter emission.	40 CFR 60.385(a); Minn. R. 7011.2700
Performance Test Pre-test Meeting: due 7 days before Performance Test.	Minn. R. 7017.2030, subp. 4
The Permittee shall record the measurements of both the change in pressure of the gas stream across the wet scrubber (CE 106) and the scrubbing liquid flow rate during the Initial Performance Test of the wet scrubber and at least weekly thereafter.	40 CFR 60.385(b); Minn. R. 7011.2700

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** SV 129 L5 Conveyor Transfer Feeder**Associated Items:** EU 285 L5 Conveyor Transfer Feeder (B4 L5 hygiene)

EU 400 L5 Pellet Scrn Fine Belt

GP 026 Post-1969 pellet handling for Steps II &amp; III

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.05 grams/dry standard cubic meter (0.022 grains/dry standard cubic foot) of exhaust gas on and after the date on which the performance test required is completed.	40 CFR 60.382(a); Minn. R. 7011.2700
Opacity: less than or equal to 10 percent opacity using 6-minute average for any process fugitive emissions on and after the 60th day after achieving the maximum production rate at which EU 400 and the screen at EU 285 will be operated, but not later than 180 days after the initial startup of EU 400 and the screen at EU 285.	40 CFR 60.382(b); Minn. R. 7011.2700
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE 114) for the continuous measurement of the change in pressure of the gas stream through the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 250 Pascals (1 inch water) gauge pressure, plus or minus; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(a); Minn. R. 7011.2700
Liquid Flow Rate: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE114) for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 5%, plus or minus, of design scrubbing liquid flow rate; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(b); Minn. R. 7011.2700
Record Gas Stream Pressure Drop and Liquid Flow Rate for CE 114 each day in operation.	Minn. R. 7011.0800
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 60 days after achieving maximum capacity, but not later than 180 days after initial startup of the affected facility (EU 400 and the screen at EU 285) to determine Total Particulate Matter emission.	40 CFR 60.385(a); Minn. R. 7011.2700
Performance Test Pre-test Meeting: due 7 days before Performance Test.	Minn. R. 7017.2030, subp. 4
The Permittee shall record the measurements of both the change in pressure of the gas stream across the wet scrubber (CE 114) and the scrubbing liquid flow rate during the Initial Performance Test of the wet scrubber and at least weekly thereafter.	40 CFR 60.385(b); Minn. R. 7011.2700

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** SV 131 L5 Conveyor Transfer 041-046 to 042 Belts**Associated Items:** EU 285 L5 Conveyor Transfer Feeder (B4 L5 hygiene)

EU 287 L5 Conveyor Transfer 041/046 to 042 Belts

EU 288 L5 Conveyor Transfer 041/046 to 042 Belts

GP 026 Post-1969 pellet handling for Steps II &amp; III

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.05 grams/dry standard cubic meter (0.022 grains/dry standard cubic foot) of exhaust gas on and after the date on which the performance test required is completed.	40 CFR 60.382(a); Minn. R. 7011.2700
Opacity: less than or equal to 10 percent opacity using 6-minute average for any process fugitive emissions on and after the 60th day after achieving the maximum production rate at which the screen at EU 285 will be operated, but not later than 180 days after the initial startup of the screen at EU 285.	40 CFR 60.382(b); Minn. R. 7011.2700
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE 116) for the continuous measurement of the change in pressure of the gas stream through the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 250 Pascals (1 inch water) gauge pressure, plus or minus; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(a); Minn. R. 7011.2700
Liquid Flow Rate: The Permittee shall install, calibrate, maintain, and operate a monitoring device for the wet scrubber (CE116) for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The monitoring device must be certified by the manufacturer to be accurate within 5%, plus or minus, of design scrubbing liquid flow rate; and must be calibrated on an annual basis in accordance with manufacturer's instructions.	40 CFR 60.384(b); Minn. R. 7011.2700
Record Gas Stream Pressure Drop and Liquid Flow Rate for CE 116 each day in operation.	Minn. R. 7011.0800
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 60 days after achieving maximum capacity, but not later than 180 days after initial startup of the affected facility (the screen at EU 285) to determine Total Particulate Matter emission. {Please Note: Air Emission Permit No. 13700005-013 has 2 Initial Performance Test requirements for SV 131 - one before the Industrial Hygiene Upgrade Project and the other after the Industrial Hygiene Upgrade Project.}	40 CFR 60.385(a); Minn. R. 7011.2700
Performance Test Pre-test Meeting: due 7 days before Performance Test.	Minn. R. 7017.2030, subp. 4
The Permittee shall record the measurements of both the change in pressure of the gas stream across the wet scrubber (CE 116) and the scrubbing liquid flow rate during the Initial Performance Test of the wet scrubber and at least weekly thereafter.	40 CFR 60.385(b); Minn. R. 7011.2700



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** SV 191 Carpenters Shop**Associated Items:** EU 391 Carpenters Shop

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac  
Permit Number: 13700005 - 001

Subject Item: SV 192 Paint Shop Booth

Associated Items: EU 392 Paint Shop Booth

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** SV 195 Hill Wood Products system**Associated Items:** EU 396 Hill Wood Products system

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 79 percent collection efficiency .	Minn. R. 7011.0065, subp. 1(A)
Particulate Matter < 10 micron: less than or equal to 79 percent control efficiency .	Minn. R. 7011.0065, subp. 1(A)
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
B. OPERATIONAL REQUIREMENTS	hdr
Process Throughput: less than or equal to 115,000 tons/year using 12-month Rolling Sum of wood waste. The amount of wood waste received shall be calculated by the 15th of each month for the previous 12-month period. A record of the amount of wood waste received shall be kept on a daily basis.	Title I Condition for Hill Woods (13700308): a 2000 action avoided review under 40 CFR 52.21
Monitoring Hill Woods Operation: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
The Permittee shall include the emission information provided by Hill Woods in air dispersion modeling and/or permit applications.	Minn. R. 7007.0800, subp. 16(L)

## TABLE B: SUBMITTALS

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac  
Permit Number: 13700005 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Fugitive Control Plan	<p>due 60 days after Permit Issuance for approval by the commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. The commissioner may require additions or changes to the O&amp;M plan when granting approval. The Permittee will be given an opportunity to comment on any required additions or changes to the plan before the commissioner grants approval of the plan. The plan may be amended by the Permittee with the Commissioner's approval. If the Commissioner determines the permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.</p> <p>The plan shall incorporate tailings basin emissions control measures required by the September 17, 1999, Stipulation Agreement, with changes approved by the Commissioner.</p>	Total Facility
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of EU 399 and the screen at EU 264.	SV122
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of EU 400 and the screen at EU 285.	SV129
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of the screen at EU 285.	SV131
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of each unit and the date construction of each unit began (EU 399 and the screen at EU 264).	SV122
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of each unit and the date construction of each unit began (EU 400 and the screen at EU 285).	SV129
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of each unit and the date construction of each unit began (the screen at EU 285).	SV131
Operation and Maintenance Plan	due 120 days after Permit Issuance for review and approval by the commissioner. The O&M plan shall identify all air pollution control equipment, a preventative maintenance program for that equipment, description of corrective actions to be taken in the event of a malfunction or breakdown, description of the employee training program, and the records kept to demonstrate plan implementation. The commissioner may require additions or changes to the O&M plan when granting approval. The Permittee will be given an opportunity to comment on any required additions or changes to the plan before the commissioner grants approval of the plan.	Total Facility
Performance Test Notification (written)	due 30 days before Performance Test	GP003, GP005, GP007, GP009, GP010, GP011, GP012, GP013, GP014, GP015, GP016, GP017, GP018, GP019, GP020, GP021, GP022, GP023, GP024, GP025, GP026, GP028, SV104, SV122, SV129, SV131

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

Performance Test Plan	due 30 days before Performance Test	GP003, GP005, GP007, GP009, GP010, GP011, GP012, GP013, GP014, GP015, GP016, GP017, GP018, GP019, GP020, GP021, GP022, GP023, GP024, GP025, GP026, GP028, SV104, SV122, SV129, SV131
Performance Test Report - Microfiche Copy	due 105 days after Performance Test	GP003, GP005, GP007, GP009, GP010, GP011, GP012, GP013, GP014, GP015, GP016, GP017, GP018, GP019, GP020, GP021, GP022, GP023, GP024, GP025, GP026, GP028, SV104, SV122, SV129, SV131
Performance Test Report	due 45 days after Performance Test	GP003, GP005, GP007, GP009, GP010, GP011, GP012, GP013, GP014, GP015, GP016, GP017, GP018, GP019, GP020, GP021, GP022, GP023, GP024, GP025, GP026, GP028, SV104, SV122, SV129, SV131
Submittal of Permit Application	due 360 days after Effective Date of Permit the Permittee shall submit parameter ranges, along with rationale for their development, in a permit amendment application, to incorporate the air pollution control equipment parameter ranges (scrubber water flow and/or pressure drop) into this permit. The rationale for choosing these ranges shall include the control equipment manufacturer's suggested ranges and any reasons for deviating from the recommended ranges.	Total Facility
Submittal	due 1,096 days after Permit Issuance to provide modeling data as specified in MPCA Guidance for Modeling Information Request. The modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP007, GP014, GP015, GP016, GP019, GP021, GP023, GP024, GP025, GP026, GP028

**TABLE B: RECURRENT SUBMITTALS**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

What to send	When to send	Portion of Facility Affected
Ambient Air Monitoring Report	due 45 days after end of each calendar quarter following Effective Date of Permit: total suspended particulate matter (TSP) monitoring reports to determine compliance with the Minnesota Ambient Air Quality Standards for TSP. Ambient monitoring will be conducted for a 3 year period, as provided by Attachment B to the September 17, 1999, Stipulation Agreement. Monitoring may be extended if violations occur.	Total Facility
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Initial Performance Test. The Permittee shall report occurrences when the measurements of the wet scrubber gas stream pressure drop (or gain) and scrubbing liquid flow differ by more than 30%, plus or minus, from the average obtained during the most recent performance test.	SV122
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Initial Performance Test. The Permittee shall report occurrences when the measurements of the wet scrubber gas stream pressure drop (or gain) and scrubbing liquid flow differ by more than 30%, plus or minus, from the average obtained during the most recent performance test.	SV129
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Initial Performance Test. The Permittee shall report occurrences when the measurements of the wet scrubber gas stream pressure drop (or gain) and scrubbing liquid flow differ by more than 30%, plus or minus, from the average obtained during the most recent performance test.	SV131
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Semiannual Deviations Report	due before end of each half-year following Initial Performance Test. The Permittee shall report occurrences when the measurements of gas stream pressure drop (or gain) and liquid flow rate of CE 070 differ by more than 30%, plus or minus, from the average obtained during the most recent performance test.	GP028
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. < The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604>	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

**TABLE C: COMPLIANCE SCHEDULE**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Table C contains the compliance schedule as required by Minn. R. 7007.0500, subp. 2 (K). You must complete the actions required in Table C by the dates listed in the table. All submittals must be postmarked or received by the date specified in the table, and certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21.**

**Subject Item:****Total Facility**

<b>Citation</b>	<b>Corrective Action</b>	<b>When to complete the action</b>
40 CFR 70.5(c)(8)(iii)(C) & 70.5(c)(8)(iv); 40 CFR 70.6(c)(3) & 70.6(c)(4); Minn. R. 7007.0500, subp. 2, item K, subitem (4); Minn. R. 7007.0800, subp. 6, item B	Submit a Modeling Protocol within 90 days of Permit Issuance to the MPCA, EPA Region 5, National Park Service, and U.S. Forest Service for approval.	
40 CFR 70.5(c)(8)(iii)(C) & 70.5(c)(8)(iv); 40 CFR 70.6(c)(3) & 70.6(c)(4); Minn. R. 7007.0500, subp. 2, item K, subitem (4); Minn. R. 7007.0800, subp. 6, item B	Submit an amendment to the existing PSD permit application within 90 days of Permit Issuance to present the emission rates used in the modeling, show their derivation and relationship to the stack test data collected at the facility to date, and show their relationship to the emission rates used to calculate the emission changes (increases and decreases) for the purposes of PSD applicability.	
40 CFR 70.5(c)(8)(iii)(C) & 70.5(c)(8)(iv); 40 CFR 70.6(c)(3) & 70.6(c)(4); Minn. R. 7007.0500, subp. 2, item K, subitem (4); Minn. R. 7007.0800, subp. 6, item B	Submit the Modeling Results within 60 days from the date of approval of the Modeling Protocol by the MPCA, EPA Region 5, National Park Service, and U.S. Forest Service, in accordance with the specifications in the approved Modeling Protocol.	
40 CFR 70.5(c)(8)(iii)(C) & 70.5(c)(8)(iv); 40 CFR 70.6(c)(3) & 70.6(c)(4); Minn. R. 7007.0500, subp. 2, item K, subitem (4); Minn. R. 7007.0800, subp. 6, item B	Submit a certified Progress Report on the PSD permitting process within 6 months of Title V Permit Issuance, and every 6 months thereafter until a PSD permit is issued for the modifications made in 1987 through 1989.	
40 CFR 70.5(c)(8)(iii)(C) & 70.5(c)(8)(iv); 40 CFR 70.6(c)(3) & 70.6(c)(4); Minn. R. 7007.0500, subp. 2, item K, subitem (4); Minn. R. 7007.0800, subp. 6, item B	The Permittee shall respond in writing to MPCA's requests for other information relevant to the existing PSD permit application, within deadlines specified in individual requests, so as to help reaching the MPCA's goal of public noticing the draft PSD permit by December 1, 2003.	



**TABLE C: COMPLIANCE SCHEDULE**

02/26/03

Facility Name: US Steel Minn Ore Operations - Minntac

Permit Number: 13700005 - 001

**Subject Item:** GP 009 Agglomerator Line 3

**Associated Items:** CE 086 Other  
CE 088 Gravity Collector - Low Efficiency  
EU 223 L3 Traveling Grate  
EU 225 L3 Rotary Kiln  
EU 226 L3 Pellet Cooler Secondary Air  
SV 103 L3 Waste Gas Stack

Citation	Corrective Action	When to complete the action
Minn. R. 7011.0610, subp. 2(A)(2)	Opacity Standard Adjustment Application: due 120 days after Permit Issuance or June 1, 2003, whichever is later. By this date, complete representative particulate matter performance testing, including tests during different seasons (including the seasons prior to Permit Issuance) and scenarios (fuels and/or pellet products) of operation, correlate the data with opacity measurements from SV 103 continuous opacity monitor, perform air dispersion modeling if applicable, and submit an Adjusted Opacity Standard application supported by the testing and modeling results, for MPCA review under Minn. R. 7011.0120. If approved, the adjustment will remain valid until taconite MACT becomes effective.	

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**DRAFT AIR EMISSION PERMIT NO. 13700005-001**

This Technical Support Document (TSD) is for all the interested parties of the draft permit. The purpose of this document is to set forth the legal and factual basis for the draft permit conditions, including references to the applicable statutory or regulatory provisions.

**1. General Information**

1.1. Applicant and Stationary Source Location:

<b>Owner &amp; Operator Address &amp; Phone Number</b>	<b>Facility Address (SIC Code: 1011)</b>
United States Steel Corporation Minnesota Ore Operations (Minntac) P.O. Box 417 Mt. Iron, MN 55768	United States Steel Corporation Minnesota Ore Operations (Minntac) County Highway 102 Mountain Iron, St. Louis County, MN

1.2. Description of the facility

U.S. Steel Minnesota Ore Operations (USS or Permittee), or commonly called Minntac, is part of U.S. Steel Corporation. USS owns and operates a taconite mine and processing plant at County Highway 102, on the Mesabi Range north of the City of Mountain Iron, St. Louis County, Minnesota.

Taconite is a rock bearing from 15 to 30 percent magnetic iron particles. The iron ore is mined in an open pit, and reduced in size by a series of crushers until it has a powdery consistency. Iron oxide concentrate is separated magnetically, while the remaining portion of the mined ore (tailings) is sent to a tailings disposal basin. A flotation step is added at Minntac to further reduce silica in the concentrate. Limestone and/or dolomite (fluxstone) is added to the concentrate and the mixture is formed into round *green balls* (pellets) in a balling drum. The green balls are then fed into an indurating process (agglomerator or grate-kiln) line, which consists of a traveling grate and a rotary kiln. Fluxstone constituent is calcined and the pellets are hardened at elevated temperature in the kiln. Finally, the taconite pellets are cooled and stored for transport to blast iron furnaces.

The USS plant was built in three successive stages or steps. The first taconite pellets were produced by the Step I facility in 1967. Step II (1972) and Step III (1978) were added, tripling the plant's original pellet-making capacity. While the main product of the USS plant is fluxed pellets which are used in blast furnaces to make molten iron, other products such as iron ore concentrate, blast furnace trim, and railroad blast are made for special customers.

### 1.3 Description of this permit issuance

This permit is issued to cover operation of the entire Minntac facility as per 40 CFR pt. 70. A recently issued permit, No. 13700005-013, which authorized construction and operation of finished pellet feeders and screens at Step II agglomerators (Lines 4 and 5), is included as part of this permit. Notice that Minntac has never been issued a total facility air emission permit before.

However, the permittee has obtained air emission permits for individual pelletizing facilities – Step I, Step II, and Step III, respectively. Air Emission Facility Permit No. 26A-84-OT-1, was issued on August 1, 1984, to authorize the installation and operation of Step III taconite processing plant, Step III boilers, Step III Incinerator, and Step III Coal Storage and Handling.

### 1.4 Description of permit actions since 1984 that are to be included in this Part 70 Permit.

<b>Permit Number &amp; Issuance Date</b>	<b>Action Authorized Since August 1984</b>
26A-91-I/O-1, issued 3/7/1991	To install 2 wet scrubbers for dust control. Relevant units, in current numbering, are CE 014, CE 015; EU 049; SV 027, SV 028 (Group 5; <i>see Table 3 for unit grouping</i> ). PM & PM <sub>10</sub> emissions were limited to avoid PSD review, thus setting up Title I conditions.
26A-92-I/O-2, issued 8/20/1992	This permit was written using the incorrect assumption that NSPS, subp. LL requirements are triggered by merely adding emission control equipment. See USS letter dated 8/26/2002, and paragraph 1.1.2 of the permit. Thus, Group 3 is now subject to Minnesota's IPER, instead of NSPS, subp. LL. Group 10 (or Agglomerator Lines 4 & 5) is now subject to IPER, instead of the Title I conditions of 0.02 gr/dscf for PM/PM <sub>10</sub> .
26A-93-I/O-3, issued 6/10/1993	To add a cure oven (2 million Btu/hr), an insignificant increase in emissions (SV 189, EU 389). Neither PSD nor NSPS was applicable.
No.13700005-007, issued 2/22/1997	To burn wood waste fuel (wood, wood bark, and sawdust) at rotary kilns of Agglomerator Lines 6 & 7 (or Group 11) and to make physical change to the limestone receiving system. Title I conditions for VOC and CO were established for Group 11 and NSPS, subp. OOO was applied to the limestone receiving system.
Draft PSD Permit No.13700005-008: permit not issued & permit number was assigned to another action	A backward-looking PSD permit for the indurating process modification completed over a period from 1987 to 1989. Public notice began 12/2/98 and ended 12/31/98 (1998 Notice). A special extension to 1/15/2000 was given to National Park Service. NPS staff asked MPCA to not issue the PSD permit because air quality and other impact analyses as well as BACT were not up-to-date, according to NPS letter dated 1/15/2001. This permitting process is still ongoing, as of 11/22/2002.
No.13700005-008, issued 4/19/2000	To change gas stream pressure drop in Action 007 for SV 084 (Title I condition) to [3.2, 5.7 in.w.c.] and liquid flow rate to [25, 45 gpm].

<b>Permit Number &amp; Issuance Date</b>	<b>Action Authorized (Continued)</b>
Co-permitting action completed, No.13700308-001, issued 8/17/2000	Hill Wood Products would install and operate the fuel (sawdust) dump under its own air quality permit; USS would also be required to list the fuel dump (pertinent EU, SV, and CE) in this Part 70 Permit with appropriate requirements.
No.13700005-009, issued 8/29/2000	To allow construction of a ported kiln at Agglomerator Line 7 with pre- and post-construction emission monitoring requirements in a state permit. EPA Region 5 permit & enforcement staff was consulted.
No.13700005-010, issued 3/19/2001	To amend Permit 26A-92-I/O-2 to change fuel additive and slag inhibitor (types and usage limits).
No.13700005-011, issued 5/3/2001	To allow a trial burn and testing at taconite furnaces.
No.13700005-012, issued 5/31/2001	To extend a submittal deadline concerning pre-construction emission monitoring of the ported kiln project (Action 009).
No.13700005-013, issued 9/19/02	To add finished pellet screens to Lines 4 and 5 (existing EU 265 & 286; new EU 399 & 400; existing CE 105 & 115), major mod due to NSPS.

#### 1.5. Facility Emissions:

The limited potential emissions (Potential-to-Emit, or PTE) for this permit action, as summarized in Table 1 “Part 70 Permit” column, are taken from “Facility Description – PTE (by Pollutant)” in DELTA, the MPCA’s permitting database. The potential emissions that would appear in a public notice for this permit action will be taken from the “Part 70 Permit” column. For comparison, the last column in Table 1 has the 1998 Public Notice PTE data for a draft PSD permit (See the original Permit Action 008 in Section 1.4).

The PTE values in Table 1 may differ from those in the respective permit applications sent by the Permittee, even though the application submittals have been verified by MPCA staff previously.

**Table 1.** Facility Total Limited Potential-to-Emit Summary (Unit: ton/year)

Air Pollutant	Part 70 Permit	1998 Notice
1. Particulate matter (PM)	56,616	67,577
2. Nitrogen oxides (NO <sub>x</sub> )	24,925	27,218
3. Particulate matter of size $\leq 10 \mu\text{m}$ (PM <sub>10</sub> )	12,419	15,111
4. Sulfur dioxide (SO <sub>2</sub> )	7,532	7,894
5. Carbon monoxide (CO)	2,150	1,990
6. Volatile organic compounds (VOC)	1,429	1,445
7. Fluoride	18	18
8. Lead (Pb)	2.27	0.19
9. Beryllium compounds	0.03	0.00055
10. Hydrofluoric acid (HF)	0.20	Not estimated
11. Hydrochloric acid (HCl)	110	Not estimated
12. Formaldehyde	94.89	Not estimated
13. Xylene	66.69	Not estimated
14. Toluene	11.9	Not estimated

**Notes for Table 1:**

1. For the first six pollutants, PM and PM<sub>10</sub> values differ between columns by more than 10%; other pollutants differ within  $\pm 10\%$ . MPCA permit staff had reviewed the 1998 Notice data. Having been reviewed, though not as thoroughly as 1998 Notice data, Part 70 Permit data were entered to DELTA by emission units (EU), according to permit application as revised and/or supplemented.
2. Fluoride value was based on total fluorides determined through stack tests (11/1990), the results of which were used for the 1998 Notice. Hydrofluoric acid (HF, vapor) value was estimated based on a stack test at Line 7 (2/21/2001) adjusted to reflect dry control at Line 3.
3. Hazardous air pollutants (HAPs) include Item 8 downward. Many HAPs have small PTE values and are not listed in Table 1 (*a total of 26 pollutants can be found in DELTA*). Xylene value is based on cleaning usage (at facility level, FC 000), taken from the permit application as revised and/or supplemented. Hydrochloric acid (HCl, vapor) and formaldehyde are based on emission factors generated for the federal taconite MACT rulemaking process (entered in DELTA at FC 000). Other values reflect the sum of both EU-specific values from permit application submittals and taconite MACT data (at FC 000). It can be said that the entire Minntac facility emits more than 25 tons of all HAPs combined. As for mercury, 0.09 ton/year is the PTE for the entire Minntac facility.

**Table 2.** Facility Classification

Classification (check appropriate box)	Major	Synthetic Minor	Minor
Prevention of Significant Deterioration	✓*		
Non-Attainment Area Review			
Part 70 Operating Permit Program	✓**		

\* The backward-looking PSD permitting action is ongoing, as of November 21, 2002.

\*\* This is the current permit action.

## 2. Regulatory Basis

Regulatory basis of the emission or operational limit is summarized for Groups in Table 3. Table 4 provides similar information for the units not included in the 28 groups defined with this permit action. A spreadsheet file attached to this document gives detail of unit grouping. Table 5 provides a summary of the recently issued permit, No. 13700005-013, which is incorporated into this Part 70 permit action, after the Part 70 permit public notice ended.

**Table 3. Regulatory Overview of Facility by Groups**

Group	Group Title & [Key Rules]	List of Units
1	Pre-1977 heating boilers [Minn.R. 7011.0510 existing indirect]	EU 001, EU 002, EU 003, EU 010, EU 011, SV 001, SV 002, SV 003, SV 010, SV 011
2	Post-1977 heating boilers [Minn.R. 7011.0515 new indirect heating]	EU 004, EU 005, SV 004, SV 005
3	Panfeeders (Pre-1969) [Minn.R. 7011.0710 ind proc eqp]	CE 004, CE 005, EU 022, EU 023, EU 024, EU 025, SV 016, SV 017
4	Zinc furnaces and miscellaneous ovens [Minn.R. 7011.0610 direct heating eqp]	EU 028, EU 029, EU 030, EU 031, EU 032, EU 033, EU 142, EU 143, EU 389, EU 390, SV 019, SV 020, SV 086, SV 189, SV 190
5	Conveyor transfer points (26A-91-I/O-1) [Permit-specific+Minn.R. 7011.0715 iper]	CE 014, CE 015, EU 049, EU 050, SV 027, SV 028
6	Stationary IC engines [Minn.R. 7011.2300]	EU 006, EU 007, EU 008, EU 009, EU 012, EU 051, EU 215, EU 216, EU 383, EU 384, EU 385, EU 386, EU 387, SV 006, SV 007, SV 008, SV 009, SV 012, SV 029, SV 098, SV 099, SV 183, SV 184, SV 185, SV 186, SV 187
7	Coal handling sources [40 CFR 60, subp. Y + Minn.R.]	CE 139, CE 140, EU 367, EU 368, EU 369, EU 370, EU 371, EU 372, EU 373, EU 374, EU 375, EU 376, EU 377, EU 378, EU 379, EU 380, EU 381, EU 382, SV 181, SV 182
8	{Reserved; see * at the end of Table 3}	EU 021, EU 224, EU 388
9	Agglomerator line 3 [Minn.R. 7011.0610 direct heating eqp; Action 010 for fuel & anti-slag additives]	CE 086, CE 088, EU 223, EU 225, EU 226, SV 103
10	Agglomeration Lines 4&5 [Minn.R. 7011.0610 direct heating eqp; Action 010 for fuel & anti-slag additives]	CE 101, CE 102, CE 103, CE 111, CE 112, CE 113, EU 259, EU 260, EU 261, EU 262, EU 280, EU 281, EU 282, EU 283, SV 118, SV 127
11	Agglomeration Lines 6 & 7 (Action 007) [Minn.R. 7011.0610 direct heating eqp; Action 010 for fuel & anti-slag additives]	CE 123, CE 124, CE 125, CE 126, CE 133, CE 134, CE 135, CE 136, EU 313, EU 314, EU 315, EU 316, EU 332, EU 333, EU 334, EU 335, SV 144, SV 151
12	Pre-1969 ore transfer around crushers [Minn.R. 7011.0710 industrial process equipment]	CE 001, CE 002, CE 008, CE 009, CE 010, CE 016, CE 021, CE 022, CE 023, CE 047, EU 013, EU 014, EU 015, EU 016, EU 034, EU 035, EU 037, EU 038, EU 040, EU 052, EU 053, EU 058, EU 059, EU 060, EU 061, EU 062, EU 063, EU 064, EU 065, EU 066, EU 067, EU 102, SV 013, SV 014, SV 021, SV 022, SV 023, SV 030, SV 035, SV 036, SV 037, SV 061
13	Post-1969 ore transfer around crushers [Minn.R. 7011.0715 industrial proc eqp]	CE 003, CE 006, CE 007, CE 009, CE 011, CE 012, CE 013, CE 023, CE 040, EU 017, EU 018, EU 019, EU 020, EU 026, EU 027, EU 036, EU 039, EU 041, EU 042, EU 043, EU 044, EU 045, EU 046, EU 047, EU 048, EU 068, EU 085, EU 086, EU 087, EU 088, EU 089, EU 090, EU 091, EU 092, SV 015, SV 018, SV 022, SV 024, SV 025, SV 026, SV 037, SV 054

**Table 3. Regulatory Overview of Facility by Groups (Continued)**

Group	Group Title & [Key Rules]	List of Units
14	Pre-1969 secondary crushers [Minn.R. 7011.0710 industrial proc eqp]	CE 017, CE 018, CE 019, CE 020, EU 054, EU 055, EU 056, EU 057, SV 031, SV 032, SV 033, SV 034
15	Pre-1969 tertiary crushers [Minn.R. 7011.0710 industrial process equipment]	CE 024, CE 025, CE 026, CE 027, CE 028, CE 029, EU 069, EU 070, EU 071, EU 072, EU 073, EU 074, SV 038, SV 039, SV 040, SV 041, SV 042, SV 043
16	Post-1969 secondary crushers [Minn.R. 7011.0715 industrial proc eqp]	CE 041, CE 042, CE 043, CE 044, CE 045, CE 048, CE 050, CE 051, CE 052, CE 053, CE 054, EU 093, EU 094, EU 095, EU 096, EU 097, EU 103, EU 106, EU 107, EU 108, EU 109, EU 110, SV 055, SV 056, SV 057, SV 058, SV 059, SV 062, SV 064, SV 065, SV 066, SV 067, SV 068
17	Post-1969 ore transfer around fine crushers [Minn.R. 7011.0715 industrial proc eqp]	CE 046, CE 049, CE 055, CE 056, CE 057, CE 058, CE 071, EU 098, EU 099, EU 100, EU 101, EU 104, EU 105, EU 111, EU 112, EU 113, EU 114, EU 115, EU 116, EU 117, EU 118, EU 119, EU 120, EU 121, EU 122, EU 123, EU 124, EU 125, EU 126, EU 127, EU 140, EU 141, SV 060, SV 063, SV 069, SV 070, SV 071, SV 072, SV 085
18	Post-1969 tertiary crushers [Minn.R. 7011.0715 industrial proc eqp]	CE 030, CE 031, CE 032, CE 033, CE 034, CE 035, CE 036, CE 037, CE 038, CE 039, CE 059, CE 060, CE 061, CE 062, CE 063, CE 064, CE 065, CE 066, CE 067, CE 068, CE 069, CE 070, EU 075, EU 076, EU 077, EU 078, EU 079, EU 080, EU 081, EU 082, EU 083, EU 084, EU 128, EU 129, EU 130, EU 131, EU 132, EU 133, EU 134, EU 135, EU 136, EU 137, EU 138, EU 139, SV 044, SV 045, SV 046, SV 047, SV 048, SV 049, SV 050, SV 051, SV 052, SV 053, SV 073, SV 074, SV 075, SV 076, SV 077, SV 078, SV 079, SV 080, SV 081, SV 082, SV 083, SV 084
19	Pre-1969 ore transfer to bins [Minn.R. 7011.0710 industrial process equipment]	CE 073, CE 074, CE 075, EU 144, EU 145, EU 148, EU 149, EU 150, EU 151, EU 152, EU 153, EU 154, EU 155, EU 156, EU 157, EU 158, EU 159, EU 160, EU 161, EU 162, EU 163, EU 164, EU 165, EU 166, EU 167, EU 168, SV 088, SV 089, SV 090
20	Post-1969 ore transfer to bins [Minn.R. 7011.0715 industrial proc eqp]	CE 072, CE 076, CE 077, CE 078, CE 079, CE 080, CE 081, CE 082, EU 146, EU 147, EU 169, EU 170, EU 171, EU 172, EU 173, EU 174, EU 175, EU 176, EU 177, EU 178, EU 179, EU 180, EU 181, EU 182, EU 183, EU 184, EU 185, EU 186, EU 187, EU 188, EU 189, EU 190, EU 191, EU 192, EU 193, EU 194, EU 195, EU 196, EU 197, EU 198, EU 199, EU 200, EU 201, EU 202, EU 203, EU 204, EU 205, EU 206, EU 207, EU 208, EU 209, EU 210, EU 211, EU 212, EU 213, EU 214, SV 087, SV 091, SV 092, SV 093, SV 094, SV 095, SV 096, SV 097
21	Pre-1969 mixing & pellet handling for Step I [Minn.R. 7011.0710 industrial process equipment]	CE 083, CE 084, CE 085, CE 089, CE 090, CE 091, CE 092, EU 217, EU 218, EU 219, EU 220, EU 221, EU 222, EU 228, EU 229, EU 230, EU 231, EU 232, EU 233, EU 234, EU 235, SV 100, SV 101, SV 102, SV 105, SV 106, SV 107, SV 108, SV 109
22	Post-1969 cooler vent stacks for Steps II & III [Minn.R. 7011.0715 ind proc eqp]	EU 263, EU 284, EU 397, EU 398, SV 119, SV 128, SV 196, SV 197

**Table 3. Regulatory Overview of Facility by Groups (Continued)**

Group	Group Title & [Key Rules]	List of Units
23	Pre-1969 bentonite equipment [Minn.R. 7011.0710 industrial proc eqp]	CE 093, CE 094, CE 095, EU 236, EU 237, EU 238, EU 239, EU 240, EU 241, EU 242, EU 243, SV 110, SV 111, SV 112
24	Post-1969 bentonite equipment [Minn.R. 7011.0715 industrial proc eqp]	CE 096, CE 097, CE 107, CE 118, CE 119, CE 129, CE 142, EU 244, EU 245, EU 246, EU 247, EU 248, EU 249, EU 250, EU 251, EU 268, EU 269, EU 270, EU 271, EU 272, EU 297, EU 298, EU 299, EU 300, EU 301, EU 302, EU 303, EU 304, EU 305, EU 320, EU 321, EU 322, EU 323, EU 324, SV 113, SV 114, SV 123, SV 139, SV 140, SV 147, SV 193
25	Post-1969 mixers for Steps II & III [Minn.R. 7011.0715 industrial proc eqp]	CE 098, CE 099, CE 100, CE 108, CE 109, CE 110, CE 120, CE 121, CE 122, CE 130, CE 131, CE 132, EU 252, EU 253, EU 254, EU 255, EU 256, EU 257, EU 258, EU 273, EU 274, EU 275, EU 276, EU 277, EU 278, EU 279, EU 306, EU 307, EU 308, EU 309, EU 310, EU 311, EU 312, EU 325, EU 326, EU 327, EU 328, EU 329, EU 330, EU 331, SV 115, SV 116, SV 117, SV 124, SV 125, SV 126, SV 141, SV 142, SV 143, SV 148, SV 149, SV 150
26	Post-1969 pellet handling for Steps II & III [Minn.R. 7011.0715 ind proc eqp]	CE 104, CE 105, CE 106, CE 114, CE 115, CE 116, CE 117, CE 127, CE 137, EU 264, EU 265, EU 266, EU 267, EU 285, EU 286, EU 287, EU 288, EU 295, EU 296, EU 317, EU 318, EU 319, EU 336, EU 337, EU 338, EU 339, EU 340, EU 399, EU 400, SV 120, SV 121, SV 122, SV 129, SV 130, SV 131, SV 138, SV 145, SV 146, SV 152, SV 153, SV 154, SV 155
27	Post-1969 conveyors without APCE [Minn.R. 7011.0715 industrial proc eqp]	EU 289, EU 290, EU 291, EU 292, EU 293, EU 294, EU 341, EU 342, EU 343, EU 344, EU 345, EU 346, EU 347, EU 348, EU 349, EU 350, EU 351, EU 352, EU 353, EU 354, EU 355, EU 356, EU 357, EU 358, EU 359, EU 360, EU 361, EU 362, EU 363, EU 364, EU 365, EU 366, SV 132, SV 133, SV 134, SV 135, SV 136, SV 137, SV 156, SV 157, SV 158, SV 159, SV 160, SV 161, SV 162, SV 163, SV 164, SV 165, SV 166, SV 167, SV 168, SV 169, SV 170, SV 171, SV 172, SV 173, SV 174, SV 175, SV 176, SV 177, SV 178, SV 179, SV 180
28	Limestone handling (Actions 007 & 008) [40 CFR pt. 60 subp.000 + Minn.R.; Title I condition for surrogate parameters]	CE 070, CE 143, EU 393, EU 394, EU 395, SV 084, SV 194

\* This group does not appear in the permit hard copy, because the group is not associated with any applicable requirements. EU 021 (“Dump Pocket”) should be deleted, according to an e-mailed spreadsheet from Larry Salmela on November 8, 2002. EU 224 (“L3 recuperative system air”) should not have been counted as an emission unit. EU 388 (“Incinerator”) has been removed in 1996. These EUs remain in DELTA merely not to confuse unit numbering.

**Table 4. Regulatory Overview of Units Not Grouped\***

Stack/Vent	Title & [Associated EU, CE]	Applicable Requirements (as Key Rules in Table 3)
104	L3 pellet cooler (EU 227)	Minn.R. 7011.0710 Pre-1969 industrial process eqp
191	Woodworking eqp (EU 391)	Minn.R. 7011.0715 Post-1969 industrial process eqp
192	Paint booth (EU 392)	Minn.R. 7011.0715 Post-1969 + permittee usage ideas
195	Hill Woods unloading (EU 396, CE 144)	Minn.R. 7007.0800, subp. 16, item L (reporting data)



**Table 5. Incorporating Permit No.13700005-013\***

Stack/Vent	GP 26: Associated EU, CE	Timeline for Initial Performance Testing
122	EU 264, EU 266, EU 267, EU 399; CE 106	Within 60 days after achieving maximum production but within 180 days of initial startup; at Line 4.
129	EU 285, EU 400; CE 114	Within 60 days after achieving maximum production but within 180 days of initial startup; at Line 5.**
131	EU 285, EU 287, EU 288; CE 116	Within 60 days after achieving maximum production but within 180 days of initial startup; at Line 5.**
131	EU 285, EU 287, EU 288, EU 400; CE 116	Within 60 days after achieving maximum production but within 180 days of completing the industrial hygiene upgrade project; at Line 5.†

\* This permit for Step II agglomerators pellet feeders/screens was issued on 9/19/2002. See Section 1.4 above. NSPS, subp. LL, is the applicable requirement [40 CFR 60.385(a); Minn. R. 7011.2700].

\*\* These initial performance tests are expected *before* an Line 5 industrial hygiene upgrade project, which is planned to occur in year 2003 (May 2003 was planned as the data for field engineering completion, according to a phone conversation between Larry Salmela and Hongming Jiang, 12/17/2002); Permit No. 13700005-013 does require initial performance testing after completion of the Line 5 industrial hygiene upgrade.

† The industrial hygiene upgrade project is fully described in the technical support document for Permit No. 13700005-013. The project will reconfigure the emission units to SV 131.

### 3. Technical Information

This Part 70 permit action does not cover the ongoing backward-looking PSD permit (see the original Permit Action 008 in Section 1.4), with the exception that the Permittee shall meet the requirements set in Table C (Compliance Schedule) of this Part 70 permit for purpose of completing the PSD permit.

The PSD permit action is backward-looking or retrospective, concerning the auxiliary burners and the alternative fuels of the main burners for the taconite pellet agglomerator lines (Lines 3, 4, 5, 6, and 7). Earlier, in a period from 1987 to 1989, the Permittee added auxiliary burners in the traveling grate at Lines 3 through 7 to facilitate fluxed pellet production, without receiving a written air emission permit. During the same period, the Permittee also requested permission to test burn wood and oat hulls in the kiln burners of Lines 3, 4, and 5. The MPCA granted the request, and found out later that permanent equipment had been installed in order to burn these fuels. These actions were allegedly in violation of PSD regulations, and were addressed in a Stipulation Agreement between the MPCA and the Permittee effective May 15, 1991.

As required by the Stipulation Agreement, the backward-looking PSD permit action must specify applicable requirements and operating and emission limitations for the auxiliary burners and the alternative fuels of the main burners. A previous public notice of the draft PSD permit generated great concerns expressed by federal land managers (FLMs, i.e., National Park Service and U.S. Forest Service) in January 1999. Subsequently, a site visit and meeting was conducted at the Minntac facility at Mt. Iron among FLMs and MPCA staff on March 23, 1999. At the end of the site visit and meeting, a brief telephone conference was added to update Ms. Rachel Rineheart, of EPA Region 5 permit staff, of the participants' understanding of how to proceed to revise the PSD permit application submittals to reflect more recent regulatory requirements.

On December 24, 2001, the MPCA determined that selective catalytic reduction is not the Best Available Control Technology (BACT) for NO<sub>x</sub> emission control for the PSD permit. National Park Service made its comments on March 5, 2002. U.S. Forest Service made its comments on August 19, 2002. Once the PSD permit is issued, its requirements will be incorporated into the Part 70 permit.

This Part 70 permit action has updated the requirements established in previous permit actions, including Air Emission Permit No. 13700005-013, issued on September 19, 2002, and the minor permit amendment application for authorizing combustion of biomass fuel, which was received by the MPCA on March 26, 2002. The minor permit amendment application is handled in such a way that it would not undercut the PSD permitting process.

#### 4. Public Comments & MPCA Resolutions Before the EPA's 45-day Review

Four comment letters were received by the Minnesota Pollution Control Agency (MPCA) during the public comment period (September 18 – October 17, 2002) from: 1) Voyageurs National Park Association (VNPA), 2) National Park Service Air Resources Division (NPS), 3) Forest Service Superior National Forest (FS), and 4) U.S. Steel Corporation Minnesota Ore Operations (USS).

These comments and MPCA's resolutions are summarized in this section of the technical support document. There is one issue (contractors' operation) for which the commenter (USS, the Permittee) and the MPCA still have different opinion as of January 8, 2003, as shown in Table 6. The MPCA is seeking the EPA's approval of its position on the issues through the issuance of this Title V permit.

**Table 6. Key Issues Unresolved Between MPCA and Permittee**

<b>Requirements in Draft Permit</b>	<b>USS (Letter, 12/16/02)</b>	<b>MPCA's Current Position</b>
Contractors: The Permittee shall retain records on site of all contractors that are allowed on site that include any crushers, screens and conveyors. The Permittee shall also retain records on site of all contractors whose operations would require an Air Emission Permit from the MPCA. The records shall include the contractor's company name, MPCA air emission permit number, short description of activities undertaken by the contractor, estimate of emissions or materials handled and the dates the contractor was on site. The record shall be updated at least monthly.	USS "still believe that there is no material reason which prevents MPCA from allowing segmented certifications for on-site contractors" and "that U.S. EPA and other Region V permitting authorities allow and encourage segmented certifications."	As explained in our letter, dated December 2, 2002, we do not see any need to alter the requirements concerning contractors in the draft permit. We do not support the "segmented certifications" approach.
The Permittee shall evaluate if the activities of any contractor required NSR permitting prior to the contractor performing such activities. If a contractor has its own permit, but it is determined that the contractor is under the common control of the taconite plant then the contractor's permit does not shield the taconite plant or the contractor from the NSR & Part 70 modification regulations or enforcement actions.		

(1) Commenter is “gravely concerned about the impacts the Minntac facility currently has and will continue to have on Voyageurs National Park, should the Minnesota Pollution Control Agency (“MPCA”) issue the permit.” Commenter is “concerned because USS failed to obtain a PSD permit in the late 1980’s for a modification that added an extra 20,000 tons per year of NO<sub>x</sub>. Although an application for a PSD permit has been pending since 1991, USS has yet to secure such a permit.” Commenter “strongly urges the MPCA to review the permit and require additional conditions, such as SCR technology, in order to protect this Class I area.” [VNPA, 10/17/2002]

**MPCA response:** The draft Title V permit is intended to cover the entire Minntac facility, with the exception that the modification that is subjected to the pending PSD permit will be addressed in a separate permit action. However, the MPCA did place one corrective action item in Table C of the draft Title V permit relevant to the pending PSD permit. We have revised Table C to add more detailed requirements (for this, see the next comment) for the PSD review, for which impacts to Class I areas as well as SCR and other control measures are addressed. When ready, the proposal to issue the PSD permit will be public noticed. Hongming Jiang called the commenter on 10/18/02 to explain the MPCA’s response.

(2) Commenters “feel the condition included in the compliance schedule section (third item, page C-1) does not conform to the criteria for compliance schedules set at 40 CFR, Section 70.5(c)(8)(iii)(C) and 40 CFR, Section 70.6(c)(3) through (4).” [FS, 10/11/2002; NPS, 10/16/2002]

Commenters stated specifically that the existing permit condition does not include the following:

- A schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to the receipt of a Prevention of Significant Deterioration (PSD) permit.
- A schedule for submission of certified progress reports no less frequently than every six months.

**MPCA response:** Citing the applicable requirements below, we have added more submittals to Table C (Compliance Schedule).

Requirements for Part 70 permit application: 40 CFR 70.5(c)(8)(iii)(C) and 40 CFR 70.5(c)(8)(iv); Minn. R. 7007.0500, subp. 2, item K, subitem (4). Requirements for Part 70 permit content: 40 CFR 70.6(c)(3) and 40 CFR 70.6(c)(4); Minn. R. 7007.0800, subp. 6, item B.

- Submit a Modeling Protocol within 90 days of Permit Issuance to the MPCA, EPA Region 5, National Park Service, and U.S. Forest Service for approval.
- Submit an amendment to the existing PSD permit application within 90 days of Permit Issuance to present the emission rates used in the modeling, show their derivation and relationship to the stack test data collected at the facility to date, and show their relationship to the emission rates used to calculate the emission changes (increases and decreases) for the purposes of PSD applicability.
- Submit the Modeling Results within 60 days from the date of approval of the Modeling Protocol by the MPCA, EPA Region 5, National Park Service, and U.S. Forest Service, in accordance with the specifications in the approved Modeling Protocol.
- Submit a certified Progress Report on the PSD permitting process within 6 months of Title V Permit Issuance, and every 6 months thereafter until a PSD permit is issued for the modifications made in 1987 through 1989.
- The Permittee shall respond in writing to MPCA's requests for other information relevant to the existing PSD permit application, within deadlines specified in individual requests, so as to help reaching the MPCA's goal of public noticing the draft PSD permit by December 1, 2003.

(3) Commenter is against Page C-1, Table C, third item, which requires submitting a response to a request for information for the pending PSD permit within 30 days of receipt, “because it is not an applicable requirement.” [USS, 10/16/2002]

**MPCA response:** The item has been revised as the last bullet item in MPCA’s response to Comment (2) above. Commenter accepted this revision in an e-mail on 1/8/2003.

(4) Stating a reorganization of USX Corporation on January 1, 2002, which made the name USX “obsolete,” commenter wants the permittee be identified as “United States Steel Corporation” only. [USS, 10/16/2002]

**MPCA response:** The permittee is now identified as “United States Steel Corporation.”

(5) Commenter wants deletion of redundant Stack/Vent references in the Visible Emission Check requirement at the Facility Level (Page A-2), because these Stack/Vents are listed elsewhere in the permit under the appropriate unit groups. [USS, 10/16/2002]

**MPCA response:** We have rephrased the requirement to avoid making the redundant stack reference at the Facility Level in the draft Title V permit.

(6) Commenter asks that the performance testing requirement for GP 027 (post-1969 conveyors without APCE) be deleted (*2 stacks would be subject to performance testing & all stacks would be subject to opacity testing*), because these “are uncontrolled and are not subject to process variables which could result in excessive visible emissions.” [USS, 10/16/2002]

**MPCA response:** We have deleted the performance test and the opacity test requirements. The fugitive dust from conveyors and conveyor transfer points are not tested normally, if they are outdoors. Enclosing these sources, as done for GP 027, actually helps to minimize emissions.

(7) Commenter does not like MPCA’s policy on contractor operations for taconite facilities. Relevant items in the permit are: Page A-2, Table A, “D. Recordkeeping Requirements,” 3<sup>rd</sup> item (see Table 6 of this technical support document); Page A-51, Table A, “Hill Wood Products System.” Commenter suggests the MPCA to use the State of Indiana’s “Segmented Permits” approach. [USS, 10/16/2002]

**MPCA response:** MPCA has adopted and implements rules that attempt to ensure MPCA's permittees are in compliance with certain state and federal air quality requirements. This practice helps permittees avoid future compliance and potential enforcement matters with EPA and others. For that reason and others, MPCA typically uses EPA guidance documents and applicability determinations in implementation of similar MPCA rule provisions. In response to commenter's comments regarding the contractor provisions, MPCA relied in part on past EPA experiences in similar situations.

The commenter acknowledges that its contractors, like Hill Wood Products, are located on contiguous property; in fact, it is MPCA staff's understanding that the Hill Wood Products facility is actually located on the commenter's property. The commenter however expresses some concern that the contractors' activities do not have the same SIC code and are not under the common control of the commenter. In regard to the SIC code issue, it has been a longstanding EPA policy that a facility that conveys, stores, or otherwise assists in the production of the principal product of another facility is considered a support facility and part of the same industrial grouping. In EPA's view, the one source classification encompasses both primary and support facilities even when the latter includes emission units with differing SIC codes. Therefore, generally USS' contractors (and thus, contractors' emissions) located on USS' property doing work or providing services for purposes of assisting USS's production should be considered as at least support facilities and as a single source for permitting and permit compliance purposes, including keeping track of the contractors' emission sources and related air quality permitting requirements.

In regard to the common control factor, EPA has established several mechanisms by which permitting authorities can determine whether there may be common control over emission sources. For example, EPA recommends that one should consider where there is a contract-for-service relationship between the two entities or if a support/dependency relation exists. While MPCA cannot speak to every "contractor" situation that USS may seek services or support from in the future, the permit conditions are directed at those contract situations where emissions will occur and where USS will likely have an ability to exert control, such as through a contract-for-services relationship. In addition, EPA has noted that companies don't just locate on another's property and do whatever they want - such relationships typically involve some contract, lease or other agreements that establish how the entities and facilities will interact with one another. EPA has indicated that it presumes that one company locating on another's property establishes a

control relationship; in that case, contractors and their related emission units on USS property are under USS control.

The record keeping and evaluation provisions on page A-2, 2<sup>nd</sup> paragraph, are consistent with these interpretations. These provisions are necessary to ensure USS is fully apprised of the effects, both legal and practical, of its contractors' activities and their onsite emission units and how those activities and emissions are addressed within the context of the NSR provisions. The permit provisions are also reasonable because USS can shift some of the evaluation work to the contractors, while remaining responsible for the final evaluation. The second sentence in the second paragraph merely makes it clear on what MPCA's compliance and enforcement position is even if the contractor has its own permit. These provisions (2nd paragraph) are also included in the LTV Steel Mining Company's Part 70 permit.

The provisions regarding the Hill Wood Products System on page A-51 are also consistent with these interpretations and are necessary to ensure the commenter complies with all applicable requirements at the time of permit issuance. The emission source, SV 195, relates to the installation and operation of a wood fuel (sawdust) dumping and loading system, and the regulatory need to control particulate emissions, opacity and to limit wood fuel throughput in order to comply with the Hill Wood Products permitting action which avoided review under 40 CFR 52.21. The wood fuel is used in the USS process. In light of the fact that the wood fuel is designated for USS use, there is the ability of USS to control this contractor's operations of the dumping and loading system in a manner that would allow USS to certify compliance with the permit conditions. MPCA's regulatory treatment of the Hill Wood Products situation is no different than MPCA's regulatory treatment of any crushing contractor that USS would bring onsite for crushing services.

The commenter suggested consideration of a "segmented" permit proposal, requiring separate compliance certifications for all contractors. The segmented language approach is more likely to confuse permit readers about the responsibilities of the various parties. The regulatory responsibilities are appropriately placed on the primary permittee and the permittee has the ability in its agreements and other arrangements with contractors to obtain the information and access to the contractors' emission units and operations to determine compliance status. The commenter's arguments about lack of knowledge or access do not comport with the facts that are known to MPCA about the types of conditions that can be negotiated with or imposed on support facilities and support contractors when they enter the primary permittee's facilities; requiring such information or access for purposes of permit compliance determinations does not appear impossible or unreasonably inconvenient to obtain. The permittee bears the ultimate responsibility for permit compliance and requiring one permittee compliance certification is consistent with that permit responsibility.

USS provided more information regarding segmented certifications in a letter dated December 16, 2002. However, the MPCA still cannot support the segmented certifications approach.

(8) Commenter would like to change performance testing requirement for Line 3 cooler vent stack (Page A-48; SV 104), which requires annual performance testing if the process line operates at least 50% of a 12 month period, to requiring first and second year testing and requiring future year testing based on test failure in the first and/or the second year. [USS, 10/16/2002]

**MPCA response:** We prefer the 50% time approach (this means we keep the testing requirement unchanged), because of the poor compliance history with cooler vent stacks (we did not realize cooler vent stacks would have compliance problems until performance testing in recent years). For comparison, we have the following requirement for GP 022 (cooler vent stacks for Lines 4 through 7):

“Performance Test: due before end of each year following Initial Performance Test on all stacks to measure PM and Opacity emissions. After at least three years of performance testing data are submitted, the Permittee may request that future testing be scheduled according to a test frequency plan proposed based on submitted testing data.”

If desired, we can rephrase the SV 104 performance testing requirement similar to the above for GP 022. However, we do not consider testing results of the first two years for Line 3 cooler vent stack sufficient for purpose of setting up future testing schedule.

(9) Commenter wants more time for Opacity Standard Adjustment Application (Page C-2) and asks to change “whichever is sooner” to “whichever is later.” Commenter also states that, if the MPCA invokes the requirement for air emissions modeling according to Minn. R. 7011.0120, subp. 2, the final deadline needs to be adjusted further. [USS, 10/16/2002]

**MPCA response:** We now use the phrase “whichever is later.”

(10) Commenter does not like the “step-specific biomass fuel” conditions and wants them deleted. Referring to Pages A-12 and A-14 for Fuel Limits for GP 009 (Line 3 Agglomerator, Section B) and GP 010 (Lines 4 & 5 Agglomerator, Section B), commenter states the “last sentence in each cited paragraph improperly prohibits the utilization of wood and oat hulls. Minntac and the MPCA signed a Stipulation Agreement in April 1991 [*MPCA note: the correct date should be May 15, 1991*], which requires the resolution of the air emissions permitting issues related to the alleged improper installation of burners in the traveling grates and sawdust combustion equipment. The MPCA cannot unilaterally withdraw the Stipulation Agreement through the Title V permit process. Furthermore, Minntac has submitted an application for a minor permit amendment according to Minnesota Rule 7007.1450 which requests that the Agglomerator lines be permitted to burn biomass as a fuel. Biomass would include wood, sawdust, oat hulls and other types of biomass. When Minntac burns various types of biomass, not only would waste be consumed that may well be landfilled but also the utilization of fossil fuels such as natural gas would be reduced. Information submitted with the biomass permit application shows that the air emissions from various types of biomass are the same. Several performance tests demonstrate that biomass participation in the grate-kiln systems reduces NO<sub>x</sub> emissions compared to natural gas firing.” [USS, 10/16/2002]

**MPCA response:** The MPCA has been trying to issue the backward-looking PSD permit first, which would have resolved the combustion of wood and oat hulls at Lines 3, 4, and 5. The May 1991 Stipulation Agreement *defers* further enforcement action for the alleged fuel violation but does not provide permit authorization for wood and oat hulls – this can only be done when the backward-looking PSD permit is issued for the modifications addressed in the Stipulation Agreement. Authorizing these fuels now in the Title V permit would undercut the PSD permit process. The Step-specific biomass definitions are appropriate measures to accommodate the March 2002 minor permit amendment application in the Title V permit without interfering with the PSD permit process.

The backward-looking PSD permit remains the appropriate permit action to authorize the combustion of wood and oat hulls at Lines 3, 4, and 5, regardless of recent performance testing on corn meals/wood or the minor permit amendment application submitted.

(11) Commenter pointed out errors in the descriptions of crushing related units and offered corrections. [USS, 10/16/2002] Subsequent discussion led to several more unit identification errors. In an e-mail, with an attached spreadsheet, USS detailed unit information errors discovered as of 11/8/2002.

**MPCA response:** Corrections have been made as per the 11/8/2002 USS e-mail. As a result, GP 008 is no longer listed in the permit. Testing of SV 054 (previously of GP 008) and another stack of GP 013 is required within 730 days after Permit Issuance.

Ten tertiary crushers have been moved from GP 015 to GP 018. Now, only one stack of GP 015 is required to be tested within 365 days after Permit Issuance; three stacks of GP 018 are required to be tested within 730 days after Permit Issuance.

As further information becomes available on unit information errors, corrections will be made as necessary, before/during the draft permit is under review by EPA.

## **5. EPA's 45-day Review**

EPA Region 5 did not make any comment on the draft Title V permit by the end of the 45-day review period, February 22, 2003.

## **6. Conclusion**

Based on the information provided by U.S. Steel Minnesota Ore Operations, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700005-001, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Hongming Jiang and Bob Beresford  
peer-reviewed by: Dick Cordes

### **Attachments:**

Unit Grouping – TFP (an Excel file on DELTA)  
SGI-07 Form submitted as part of the permit application (rev. 7/27/2000)