

**DRAFT/PROPOSED**

**AIR EMISSION PERMIT NO. 13700005 - 006**

**Major Amendment**

**IS ISSUED TO**

US Steel Corp

**US STEEL CORP - MINNTAC**

8819 Old Highway 169

Mountain Iron, St. Louis County, MN 55768

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 13700005-004 and authorizes the Permittee to operate and construct the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the State Implementation Plan (SIP) under 40 CFR § 52.1220 and as such are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

**Permit Type:** Federal; Pt 70/Major for NSR;

**Operating Permit Issue Date:** <issue date>

**Expiration Date:** 02/26/2008 – All Title I Conditions do not expire.

\* The Permittee may continue to operate this facility after the expiration date of the permit, per the provision under Minn. R. 7007.0450, subp. 3. (Title V Reissuance Application was received 08/22/2007.)

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Don Smith, P.E., Manager  
Air Quality Permits Section  
Industrial Division

for John Linc Stine  
Commissioner  
Minnesota Pollution Control Agency

**Permit Applications Table**

<b>Permit Type</b>	<b>Application Date</b>	<b>Permit Action</b>
Total Facility Operating Permit <-Reissuance>	01/15/1995	001
Major Amendment	MPCA initiated – 05/16/2003	002
Major Amendment; Administrative Amendment	10/23/2003; 03/15/2004	003
Major Amendment	Not Issued	004
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2. Visible Emission Checklists (for Permit No. 13700005-001)
3. Minntac Modeling Parameters (for Permit No. 13700005-004)

**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 mine and processing facility, known as Minntac, 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 (magnetite). 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. Limestone and/or dolomite (fluxstone) and bentonite (binder) are added to the concentrate and the mixture is formed into round “green balls (pellets)” in a balling drum. The green balls are heat hardened in an indurating process (agglomerator or grate-kiln) line, which consists of a traveling grate, a rotary kiln, and a horizontal rotary hearth (commonly called annular cooler). Finished taconite pellets are stored for transport to blast iron furnaces. While the main product of the Minntac facility 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 ballast are made for special customers.

The Minntac facility was built in three successive stages or steps. The first taconite pellets were produced by the Step I facility in 1967. When Step II (1972) and Step III (1978) were added, the facility’s pellet-making capacity was tripled.

**AMENDMENT DESCRIPTION:**

This Major Amendment permit action authorizes the replacement of the existing main kiln burners with Low Nitrogen Oxides (NO<sub>x</sub>) Main Burners on the facility’s induration lines 4 and 5 (CE 181 with SV 118 and CE 182 with SV 127; respectively). This project will reduce NO<sub>x</sub> emissions from baseline emission rates. Remaining pollutants will remain at previously permitted rates.

This permit action also removes language from the Total Facility level listed under “F. Retroactive Prevention of Significant Deterioration Program (PSD) Permitting Requirements – Tasks, Reports and CEMS related to language requesting a Computational Fluid Dynamics (CFD) modeling report and installation of Low NO<sub>x</sub> Burners at the traveling grate preheat zones of the Agglomerator Lines 3 -7. Minntac completed conditions related to CFD modeling as well as installed the traveling grate preheat Low NO<sub>x</sub> burners in 2009.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

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Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
The Permittee shall submit limits and other conditions, if necessary, to be incorporated into an enforceable document by: the 1-hour SO <sub>2</sub> NAAQS attainment date established by EPA; the Regional Haze State Implementation Plan Revision date which is currently, 2018; or as required by any other applicable federal law, whichever is earliest.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
The Permittee shall submit limits and other conditions, if necessary, to be incorporated into an enforceable document by: the 1-hour NO <sub>2</sub> NAAQS attainment date established by EPA; the Regional Haze State Implementation Plan Revision date which is currently, 2018; or as required by any other applicable federal law, whichever is earliest.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subp. 7(A), 7(L), & 7(M); Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
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 - Subject Item: Total Facility, Section F; Subject Items MR1 through MR5).	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)

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

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Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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.  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 use 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.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
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.  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.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
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&M Plan and Fugitive Control Plan.	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
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A). Computerized formats can be used, provided that the Permittee maintains reliable backup for data retrieval.	Minn. R. 7007.0800, subp. 5(C)
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.  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.	Minn. R. 7007.0800, subp. 2
<b>E. REPORTING REQUIREMENTS</b>	hdr
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-3** 06/05/13

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Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.  At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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. Retroactive PSD Permitting Requirements - Tasks, Reports and CEMS (Table A under Subject Item: MR 001 through MR 005, and Table B have additional CEMS requirements)	hdr
The Permittee shall commence pilot testing of selected NOx control technologies, upon receipt of written MPCA approval of the selection and the test schedule and receipt of permit(s) as needed. The Permittee shall collect data to be used for evaluation of control technology success. Pilot tests shall be completed by 12/31/2009, or as outlined in MPCA approved schedule, whichever is later.  MPCA will evaluate the control technology using the following criteria at a minimum: 1. technical feasibility or impact to pellet quality; 2. significant NOx reduction; 3. cross media impacts; 4. multi-pollutant co-control benefits; 5. energy efficiency or consumption impact; and 6. economic feasibility.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
No more than 60 days after pilot test completion, submit Pilot Test Results of NOx control technologies for MPCA's approval. The Pilot Test Results submittal shall include, at a minimum, a technical description of each control technology tested, and a summary of major physical and chemical data obtained that are important for deciding whether or not the technology should be demonstrated. With the Pilot Test Results, the Permittee shall propose one control technology for full scale demonstration on one Agglomerator line and shall rank the other control technologies that have been pilot tested for potential demonstration.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
The Permittee shall submit a schedule of equipment installation and anticipated startup of the full - scale demonstration on Line 4 (EU 261) Line 5 (EU 282) within 60 days of Permit Issuance. { This is a reminder; the requirement can also be found in Table B. }	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-4** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

<p>The Permittee shall commence full scale demonstration of the selected NOx control technology at one Agglomerator line, upon receipt of MPCA permit(s). This includes, but is not limited to the following tasks: 1) compiling emission monitoring and stack testing data that were generated before installing the control technology; 2) installing and operating the control technology; 3) monitoring emissions and conducting stack testing with the control technology operating; 4) collect capital and operating cost data. The goal is to have the demonstration completed by 2/1/2011. A goal is a target for the Permittee but is not intended to be an enforceable permit condition.</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>Within 60 days following completion of the full scale demonstration, submit a Full Scale Demonstration Report for MPCA approval. At a minimum, the report shall include a summary of: 1) mass rate (lb/hr) and concentration (ppmv, dry) of NOx, SO2, CO, and mercury entering and exiting each demonstrated control technology; 2) control efficiencies and emission factors in lb/dry, long ton of pellets made and in lb/million Btu total heat input for NOx, SO2, CO, and mercury, based on statistical analyses of hourly continuous emission and process monitoring results and, if necessary, additional stack testing results; and 3) cross-media quantification for scrubbing and/or plant process water.</p> <p>(To be continued in the next box)</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>(Continued from the box above)</p> <p>MPCA will evaluate the full scale technology demonstration using the criteria specified to evaluate the pilot testing at a minimum. The goal is to have NOx control technology installation completed for all operating lines by 2/1/2014, or as outlined in MPCA approved schedule, whichever is later. A goal is a target for the Permittee but is not intended to be an enforceable permit condition.</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>If the MPCA determines that the demonstrated control technology should not be installed on the remaining lines in operation, the Permittee shall commence demonstration of the next-ranked control technology option that was submitted with the Pilot Test Results and shall submit a Full Scale Demonstration report as required above. The Permittee shall continue this process until either the MPCA approves a control technology for installation on the remaining lines in operation or all of the ranked technology options have been exhausted. If all of the ranked technology options are exhausted and the MPCA has not approved a technology for installation on the remaining lines in operation, the Permittee shall propose a schedule for completion of a Supplemental Engineering Analysis that at a minimum identifies any previously unidentified NOx control technologies, NOx reduction strategies or then current industry practices. (To be continued in the next box)</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>(Continued from the box above) The specific provisions of the Supplemental Engineering Analysis shall be incorporated into the permit through the submission of a major permit amendment.</p> <p>The Supplemental Engineering Analysis shall be submitted to the MPCA no later than 60 days after written notification from the MPCA that none of the pilot tested technologies are approvable for installation on all lines in operation. The Supplemental Engineering Analysis will identify new potentially feasible control technologies, based on previously identified criteria, and propose a schedule, for MPCA approval, of supplemental pilot tests, pilot test reports, installation of technology for a full scale demonstration, demonstration project reports, and full installation of control technology at remaining operating Agglomerator lines.</p> <p>(To be continued in the next box)</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>(Continued from the box above)</p> <p>If the Supplemental Engineering Analysis concludes that no technologies are currently feasible, based on previously identified criteria, and MPCA approves, another Supplemental Engineering Analysis will be submitted by the Permittee within 1095 days of last Supplement Engineering Analysis submittal, with all of the procedures that the MPCA has previously approved, with the exception that the Permittee need not obtain a major permit amendment to implement additional Supplemental Engineering Analyses. The Permittee shall continue to submit Supplemental Engineering Analyses every 1095 days until NOx control technologies have been installed on all operating Agglomerator lines.</p> <p>(To be continued in the next box)</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
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Facility Name: US Steel Corp - Minntac

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<p>(Continued from the box above)</p> <p>If, after initial engineering analyses, pilot testing, demonstration projects, and an initial Supplemental Engineering Analysis, no control technologies are approved for full installation and significant NOx emission reductions have been achieved without full installation of control technologies on all operating Agglomerator lines, the Permittee may submit a request, in the form of a major permit amendment, to cease trials of NOx emissions control technologies.</p> <p>(End of the requirement that takes 4 boxes to hold)</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>If the MPCA approves a demonstrated control technology for installation at the remaining lines in operation, the Permittee shall commence installation upon receipt of MPCA permits(s). If a non-operating line recommences operation, the Permittee shall install the approved NOx control technology before the line resumes operation. Installation includes, but is not limited to: 1) installing and operating the control technology; 2) monitoring emissions and conducting stack testing with the control technology operating and setting emission limits; and 3) collect capital and operating cost data.</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>Within 60 days after completion of full scale installation, submit a Final NOx Reduction Report for MPCA approval to document the NOx reduction process and major findings. At a minimum, the Final Report shall include a summary of: 1) demonstrated control efficiency of the control technology installed at each line and the emission factors (lb/LT pellets; lb/million Btu of total heat input) for each pollutant determined during the full scale demonstration; 2) associated cross-media impacts assessed and mitigation measures; 3) annualized cost of NOx control for the control technology installed (of capital cost for equipment and operation cost) per ton of NOx removed; 4) Low NOx burners, CFD work, the benefit of CEMS application, and other measures taken that contribute to reduction in induration NOx formation.</p>	<p>Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000</p>
<p>Emission Monitoring: The owner or operator shall use a CEMS to measure mass emissions of NOx and SO2 from each of the following stacks: SV 103 (GP 009), SV 118 &amp; SV 127 (GP 010), and SV 144 &amp; SV 151 (GP 011). Monitoring requirements are located under the associated subject items (MR 001 through MR 005).</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006</p>
<p>Continuous Operation: CEMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A CEMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1090.</p>
<p>Monitoring Data: All data points collected by a CEMS shall be used to calculate individual hourly emission averages unless another applicable requirement or compliance document requires more frequent averaging. Each hourly average starts at the beginning of the hour and ends at the beginning of the following hour. In order for an hour of data to be considered, it must contain the following minimum number of data points: a) four data points, equally spaced, if the emission unit operated during the entire hour; b) two data points, at least 15 minutes apart, during periods of monitor calibration or routine maintenance; and c) one data point, if the emission unit operated for 15 minutes or less during the hour.</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1160, subp. 1 and 2.</p>
<p>QA Plan: Develop and implement a written quality assurance plan that covers each CEMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain all of the information required by 40 CFR 60, Appendix F, section 3. The plan shall include the manufacturer's spare parts list for each CEMS and require that those parts be kept at the facility unless the Commissioner gives written approval to exclude specific spare parts from the list.</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 2.</p>
<p>CEMS Daily Calibration Drift (CD) Test: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) gas concentrations at least once daily according to the procedures listed in Minn. R. 7017.1170, subp. 3 and 40 CFR 60.13(d)(1) for each pollutant concentration, each diluent monitor, and for each monitor range. The CEMS shall be adjusted whenever the CD exceeds twice the specification of 40 CFR 60, Appendix B. If no span value is specified in the applicable requirement or in a compliance document, the Permittee shall use a span value equivalent to 1.5 times the emission limit. 40 CFR 60, Appendix F, shall be used to determine out-of-control periods for CEMS. Follow the procedures in 40 CFR 60, Appendix F.</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 3.</p>
<p>Relative Accuracy Test Audit (RATA) Notification: due 30 days before CEMS Relative Accuracy Test Audit (RATA).</p>	<p>Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1180, subp. 2.</p>
<p>G. MISCELLANEOUS</p>	<p>hdr</p>

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

Extension Requests: Except for Title I Conditions, 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)
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
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

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-8**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-9**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 02/26/2003 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****A-10**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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

**Associated Items:** EU 028 Zinc Melt Furnace  
 EU 031 Zinc Melt Furnace  
 EU 032 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****A-11**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 11/30/2004 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****A-12**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: GP 006 Stationary internal combustion engines**

**Associated Items:**

- EU 006 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 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****A-13**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 11/07/2003 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****A-14** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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

CE 088 Gravity Collector - Low Efficiency

CE 145 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 146 Wet Scrubber-High Efficiency

EU 223 L3 Traveling Grate

EU 225 L3 Rotary Kiln

EU 226 L3 Pellet Cooler Secondary Air

MR 001 NOx &amp; SO2 CEMS at Line 3 Waste Gas Stack (SV 103)

SV 103 L3 Waste Gas Stack

What to do	Why to do it
<b>A. POLLUTANT LIMITS</b>	hdr
Nitrogen Oxides: less than or equal to 5000 lbs/hour using 24-hour Block Average from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 13300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance. Representative NOx emission data shall be used to demonstrate compliance for the first 365 days.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 7300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) no later than Feb. 1, 2010.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Fluorides: less than or equal to 1.04 lbs/hour using 3-hour Average at Line 3 Waste Gas Stack (SV 103).	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Carbon Monoxide: less than or equal to 68.8 lbs/hour using 3-hour Average at Line 3 Waste Gas Stack (SV 103).	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Volatile Organic Compounds: less than or equal to 51.6 lbs/hour using 3-hour Average , as propane, at Line 3 Waste Gas Stack (SV 103).	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
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 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
(Note - CEMS requirements can be found in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001 through MR 005; and in Table B)	
Fuel Restrictions: The Permittee shall combust at the kiln burner natural gas, fuel oil, and/or types of biomass that are specified in Appendix 1 of this permit; and at the preheat burners natural gas. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit.	Title I Condition: To address fuel options for the indurating process modification of 1987-1989, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

Material/Fuel Usage and Sulfur Content: The Permittee shall 1) record the amount of materials and fuel consumed each day; 2) obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel, or 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; 3) sample materials entering the grate-kiln once each calendar week; and 4) maintain records of the fuel deliveries, material usage, and analyses results. 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.	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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Waste Gas to Heat Input Ratio: The Permittee shall calculate and record, for each hour when valid data are available, the ratio of SV 103 gas flow, as measured by CEMS in cubic feet per hour in standard conditions (scfh), to total heat input at kiln and grate burners in British Thermal Units per hour (Btu/hr). This ratio will be used as an indicator to learn how complete CO & VOC are destroyed in the indurating furnace.	Title I Condition: Monitoring for CO & VOC BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 180 days after 12/22/2008 to measure Fluorides, CO, and VOC emissions at Line 3 Waste Gas Stack (SV 103).	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Performance Test: due before end of each 60 months starting 05/17/2005 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

A-16 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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  
CE 181 Line 4 Low NOx Main Burner  
CE 182 Line 5 Low NOx Main Burner  
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  
MR 002 NOx & SO2 CEMS at Line 4 Waste Gas Stack (SV 118)  
MR 003 NOx & SO2 CEMS at Line 5 Waste Gas Stack (SV 127)  
SV 118 L4 Waste Gas Stack  
SV 127 L5 Waste Gas Stack

What to do	Why to do it
CONSTRUCTION AUTHORIZATION	hdr
Construction Authorization for CE 181 and CE 182: The construction authorization expires 5 years after permit issuance. The Permittee must keep a record of the dates of installation and start-up on site. The Permittee may apply for an extension of the construction authorization deadline by following the Administrative Amendment provisions in Minn. R. 7007.1400.	Title I Condition: To avoid classification of changes as major modifications under 40 CFR Section 52.21 & Minn. R. 7007.3000
A. POLLUTANT LIMITS	hdr
Nitrogen Oxides: less than or equal to 5000 lbs/hour using 24-hour Block Average from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 13300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance. Representative NOx emission data shall be used to demonstrate compliance for the first 365 days.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 7300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) no later than Feb. 1, 2010.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Fluorides: less than or equal to 1.62 lbs/hour using 3-hour Average at Line 4 Waste Gas Stack (SV 118) and Line 5 Waste Gas Stack (SV 127), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Carbon Monoxide: less than or equal to 98.6 lbs/hour using 3-hour Average at Line 4 Waste Gas Stack (SV 118) and Line 5 Waste Gas Stack (SV 127), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Volatile Organic Compounds: less than or equal to 74.0 lbs/hour using 3-hour Average, as propane, at Line 4 Waste Gas Stack (SV 118) and Line 5 Waste Gas Stack (SV 127), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-17 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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>B. OPERATION REQUIREMENTS</b>  (Note - CEMS requirements can be found in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001 through MR 005; and in Table B)	hdr
Fuel Restrictions: The Permittee shall combust at the kiln burner natural gas, fuel oil, and/or types of biomass that are specified in Appendix 1 of this permit; and at the preheat burners natural gas. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit.	Title I Condition: To address fuel options for the indurating process modification of 1987-1989, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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 or 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)
The Permittee shall operate and maintain the scrubber (CE 103) at any time that the process equipment controlled by the scrubber (EU 261) is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the scrubber (CE 113) at any time that the process equipment controlled by the scrubber (EU 282) is in operation. The Permittee shall document periods of non-operation of the control equipment.	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 2 and 14
The Permittee shall operate and maintain the scrubbers in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
<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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Waste Gas to Heat Input Ratio: The Permittee shall calculate and record, for each hour when valid data are available, the ratio of SV 118 gas flow, as measured by CEMS in cubic feet per hour in standard conditions (scfh), to total heat input at kiln and grate burners of Line 4 in British Thermal Units per hour (Btu/hr); and, similarly, the ratio of SV 127 gas flow to total heat input of Line 5. The ratio will be used as an indicator to learn how complete CO & VOC are destroyed in each indurating furnace.	Title I Condition: Monitoring for CO & VOC BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 180 days after 12/22/2008 to measure Fluorides, CO, and VOC emissions at Line 4 Waste Gas Stack (SV 118) and Line 5 Waste Gas Stack (SV 127), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

Performance Test: due before end of each 60 months starting 05/18/2005 on the stack that was not tested in the previous 60-month period 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**
**A-19** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
- MR 004 NOx & SO2 CEMS at Line 6 Waste Gas Stack (SV 144)
- MR 005 NOx & SO2 CEMS at Line 7 Waste Gas Stack (SV 151)
- SV 144 L6 Waste Gas Stack
- SV 151 L7 Waste Gas Stack

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Nitrogen Oxides: less than or equal to 5000 lbs/hour using 24-hour Block Average from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 13300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) at Permit Issuance. Representative NOx emission data shall be used to demonstrate compliance for the first 365 days.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Nitrogen Oxides: less than or equal to 7300 tons/year using 365-day Rolling Sum from all five waste gas stacks combined (GP 009 through 011; SV 103, 118, 127, 144, and 151) no later than Feb. 1, 2010.	Title I conditions: to mitigate adverse impacts on Class I areas visibility from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000
Fluorides: less than or equal to 1.62 lbs/hour using 3-hour Average at Line 6 Waste Gas Stack (SV 144) and Line 7 Waste Gas Stack (SV 151), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
Carbon Monoxide: less than or equal to 74.0 lbs/hour using 3-hour Average at Line 6 Waste Gas Stack (SV 144) and Line 7 Waste Gas Stack (SV 151), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
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) at Lines 6 and 7 combined.	Title I Condition: a 1997 action that avoided major classification under 40 CFR 52.21
Volatile Organic Compounds: less than or equal to 54.3 lbs/hour using 3-hour Average, as propane, at Line 6 Waste Gas Stack (SV 144) and Line 7 Waste Gas Stack (SV 151), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.
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) at Lines 6 and 7 combined.	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)



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-20** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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>B. OPERATION REQUIREMENTS</b>  (Note - CEMS requirements can be found in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001 through MR 005; and in Table B)	hdr
Fuel Restrictions: The Permittee shall combust at the kiln burner natural gas, coal, fuel oil, and/or types of biomass that are specified in Appendix 1 of this permit; and at the preheat burners natural gas. Other fuels may be combusted for a short period of time during a trial burn as approved by an amendment to this permit.	Title I Condition: To address fuel options for the indurating process modification of 1987-1989, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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
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 or 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 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)
<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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; 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.	Title I Condition: Monitoring for fluoride BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
Waste Gas to Heat Input Ratio: The Permittee shall calculate and record, for each hour when valid data are available, the ratio of SV 144 gas flow, as measured by CEMS in cubic feet per hour in standard conditions (scfh), to total heat input at kiln and grate burners of Line 6 in British Thermal Units per hour (Btu/hr); and, similarly, the ratio of SV 151 gas flow to total heat input of Line 7. The ratio will be used as an indicator to learn how complete CO & VOC are destroyed in each indurating furnace.	Title I Condition: Monitoring for CO & VOC BACT, 40 CFR 52.21(j)(3); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4(D); subp. 14; subp. 16(J)
<b>D. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 180 days after 12/22/2008 to measure Fluorides, CO, and VOC emissions at Line 6 Waste Gas Stack (SV 144) and Line 7 Waste Gas Stack (SV 151), respectively.	Title I Condition: BACT emission limit, 40 CFR 52.21(j)(3); Minn. R. 7007.3000.

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

Performance Test: due before end of each 60 months starting 04/20/2005 on the stack that was not tested in the previous 60-month period 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**
**A-22**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: GP 012 Pre-1969 ore transfer points around crushers**
**Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 008 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 047 Wet Scrubber-High Efficiency w/o Lime

EU 013 Step I Coarse Crusher

EU 014 Step I Coarse Crusher

EU 034 Conveyor Transfer 005-006

EU 035 Conveyor Transfer 005-006

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 021 Conveyor Transfer 005-006

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
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

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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 12/22/2008 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****A-24**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: GP 013 Post-1969 ore transfer points around crushers****Associated Items:** CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 003 Fabric Filter - Low Temperature, i.e., T&lt;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 015 Step II Coarse Crusher

EU 016 Step II Coarse Crusher

EU 017 Step III Coarse Crusher &amp; Lime Dump

EU 018 Step III Coarse Crusher &amp; Lime Dump

EU 019 Step III Coarse Crusher &amp; Lime Dump

EU 020 Step III Coarse Crusher &amp; Lime Dump

EU 026 Step III Coarse Crusher Pan Feeders &amp; Lime Transfer

EU 027 Step III Coarse Crusher Pan Feeders &amp; Lime Transfer

EU 036 Conveyor Transfer 010-01

EU 037 Conveyor Transfer 010-01

EU 038 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 014 Step II Coarse Crusher

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

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

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Associated Items:** 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
<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 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 11/30/2004 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****A-26**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
<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); 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 180 days after 11/07/2003 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****A-27**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
<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); 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 365 days after 11/30/2004 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

A-28

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-29**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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 11/07/2003 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

A-30

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-31**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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: 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)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after 11/30/2004 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****A-32**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
- 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
- SV 044 Tertiary Crusher L7
- SV 045 Tertiary Crusher L8
- SV 046 Tertiary Crusher L9

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-33**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Associated Items:**

- 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

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 11/30/2004 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

A-34

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-35**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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 11/07/2003 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****A-36**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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**
**A-37**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 11/30/2004 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****A-38**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 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****A-39**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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 11/07/2003 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****A-40**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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
<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.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>B. OPERATION REQUIREMENTS</b>	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)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 365 days after 11/30/2004 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****A-41**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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&lt;180 Degrees F

CE 095 Fabric Filter - Low Temperature, i.e., T&lt;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 11/07/2003 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

A-42

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-43**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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)
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)
<b>C. PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Initial Performance Test: due 730 days after 11/07/2003 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****A-44**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-45**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 11/07/2003 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

A-46

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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

**Associated Items:**

- CE 104 Wet Scrubber-High Efficiency w/o Lime
- CE 105 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 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 265 L4 Cooler Discharge
- EU 286 L5 Cooler Discharge
- EU 295 S3 Conveyor Transfer
- EU 296 S3 Conveyor Transfer
- EU 317 L6 Cooler Dump zone
- EU 336 L7 Cooler Dump Zone
- EU 339 Step I 043/044 Conveyor Transfer
- EU 340 Step I 043/044 Conveyor Transfer
- SV 120 L4 Conveyor Transfer Feeder
- SV 121 L4 Cooler Dump Zone
- SV 129 L5 Conveyor Transfer Feeder
- SV 130 L5 Cooler Dump Zone
- SV 138 S3 Conveyor Transfer
- SV 146 L6 Conveyor Transfer
- 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
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
Pressure Drop: greater than or equal to 13.5 inches of water column using 8-hour Block Average on the gas stream. 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); 7017.2025, subp. 3
Liquid Flow Rate: greater than or equal to 297 gallons/minute using 8-hour Block Average on the wet scrubber. 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); 7017.2025, subp. 3
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after 11/07/2003 on one stack from (SV 121, 130, 146, or 153) 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****A-47**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: GP 027 Post-1969 conveyor transfer points 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 318 L6 Conveyor Transfer
- EU 319 L6 Conveyor Transfer
- EU 337 L7 Conveyor Transfer
- EU 338 L7 Conveyor Transfer
- 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

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-48**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Associated Items:**

- 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
- 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****A-49**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item:** GP 028 Limestone handling (Actions 007 and 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 139 Tertiary Crusher L29  
EU 393 Limestone Dump Pocket  
EU 394 Limestone conveyer or transfer 1  
EU 395 Limestone conveyer or transfer 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 11/30/2004 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****A-50**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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 11/30/2004 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****A-51**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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

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 LIMITS</b>	hdr
Liquid Flow Rate: greater than or equal to 240 gallons/minute using 24-hour Rolling Average .	Minn. R. 7017.2025, subp. 3
<b>C. 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
Record Gas Stream Pressure Drop and Liquid Flow Rate for CE 106 each day in operation.	Minn. R. 7011.0800
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
<b>D. 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 emissions.	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****A-52**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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

EU 400 L5 Pellet Scrn Fine Belt

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 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>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 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
<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 (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****A-53**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-54**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**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****A-55**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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

What to do	Why to do it
Process Throughput: less than or equal to 220,000 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: Limit to avoid classification as a major modification under 40 CFR 52.21; and Minn. R. 7007.3000
Total Particulate Matter: greater than or equal to 90 percent capture efficiency and less than 0.54 lb/hr at SV 195 after control by CE 144 (fabric filter)	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21; and Minn. R. 7007.3000
Particulate Matter < 10 micron: greater than or equal to 90 percent capture efficiency and less than 0.32 lb/hr at SV 195 after control by CE 144 (fabric filter)	Title I Condition: Limit to avoid classification as a major modification under 40 CFR 52.21; and Minn. R. 7007.3000
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Monitoring: The visible emissions observer on 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, and 16(J)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-56**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: MR 001 NOx & SO2 CEMS at Line 3 Waste Gas Stack (SV 103)****Associated Items:** CE 146 Wet Scrubber-High Efficiency

GP 009 Agglomerator Line 3

SV 103 L3 Waste Gas Stack

What to do	Why to do it
CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) Requirements  (See additional CEMS requirements in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 002 through MR 005; and in Table B)	hdr
Initial Startup of the Monitor: due 30 days after 12/22/2008 . Monitor is the continuous emission monitoring system (CEMS), which is defined as the total equipment used to sample, condition (if applicable), analyze, and provide a permanent record of emissions of NOx and SO2 in lb/hr.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006.
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required. The first EER is due 30 days after the end of the calendar quarter following Permit Issuance. Follow the Performance Specifications listed in 40 CFR 60, Appendix B. Note that some changes that affect the CEMS may require recertification.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1.
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 80 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4.
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emission unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR 60, Appendix F, section 5.1.1.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5.
Excess Emissions/Downtime Reports (EER's): due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter. { This is a reminder; the same requirement can be found in Table B of this permit. }	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1110, subp. 1 and 2.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-57

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item:** MR 002 NOx & SO2 CEMS at Line 4 Waste Gas Stack (SV 118)**Associated Items:** CE 103 Wet Scrubber-High Efficiency w/o Lime

GP 010 Agglomeration Lines 4 &amp; 5

SV 118 L4 Waste Gas Stack

What to do	Why to do it
CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) Requirements  (See additional CEMS requirements in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001, and MR 003 through MR 005; and in Table B)	hdr
Initial Startup of the Monitor: due 30 days after 12/22/2008 . Monitor is the continuous emission monitoring system (CEMS), which is defined as the total equipment used to sample, condition (if applicable), analyze, and provide a permanent record of emissions of NOx and SO2 in lb/hr.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006.
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required. The first EER is due 30 days after the end of the calendar quarter following Permit Issuance. Follow the Performance Specifications listed in 40 CFR 60, Appendix B. Note that some changes that affect the CEMS may require recertification.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1.
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 80 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4.
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emission unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR 60, Appendix F, section 5.1.1.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5.
Excess Emissions/Downtime Reports (EER's): due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter. { This is a reminder; the same requirement can be found in Table B of this permit. }	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1110, subp. 1 and 2.

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-58**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item: MR 003 NOx & SO2 CEMS at Line 5 Waste Gas Stack (SV 127)****Associated Items:** CE 113 Wet Scrubber-High Efficiency w/o Lime

GP 010 Agglomeration Lines 4 &amp; 5

SV 127 L5 Waste Gas Stack

What to do	Why to do it
CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) Requirements  (See additional CEMS requirements in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001, MR 002, MR 004, and MR 005; and in Table B)	hdr
Initial Startup of the Monitor: due 30 days after 12/22/2008 . Monitor is the continuous emission monitoring system (CEMS), which is defined as the total equipment used to sample, condition (if applicable), analyze, and provide a permanent record of emissions of NOx and SO2 in lb/hr.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006.
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required. The first EER is due 30 days after the end of the calendar quarter following Permit Issuance. Follow the Performance Specifications listed in 40 CFR 60, Appendix B. Note that some changes that affect the CEMS may require recertification.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1.
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 80 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4.
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emission unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR 60, Appendix F, section 5.1.1.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5.
Excess Emissions/Downtime Reports (EER's): due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter. { This is a reminder; the same requirement can be found in Table B of this permit. }	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1110, subp. 1 and 2.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-59

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item:** MR 004 NOx & SO2 CEMS at Line 6 Waste Gas Stack (SV 144)**Associated Items:** CE 126 Wet Scrubber-High Efficiency w/o Lime

GP 011 Agglomeration Lines 6 &amp; 7 (Action 007)

SV 144 L6 Waste Gas Stack

What to do	Why to do it
CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) Requirements  (See additional CEMS requirements in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001 through MR 003, and MR 005; and in Table B)	hdr
Initial Startup of the Monitor: due 30 days after 12/22/2008 . Monitor is the continuous emission monitoring system (CEMS), which is defined as the total equipment used to sample, condition (if applicable), analyze, and provide a permanent record of emissions of NOx and SO2 in lb/hr.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006.
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required. The first EER is due 30 days after the end of the calendar quarter following Permit Issuance. Follow the Performance Specifications listed in 40 CFR 60, Appendix B. Note that some changes that affect the CEMS may require recertification.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1.
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 80 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4.
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emission unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR 60, Appendix F, section 5.1.1.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5.
Excess Emissions/Downtime Reports (EER's): due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter. { This is a reminder; the same requirement can be found in Table B of this permit. }	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1110, subp. 1 and 2.



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-60**

06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

**Subject Item:** MR 005 NOx & SO2 CEMS at Line 7 Waste Gas Stack (SV 151)**Associated Items:** CE 136 Wet Scrubber-High Efficiency w/o Lime

GP 011 Agglomeration Lines 6 &amp; 7 (Action 007)

SV 151 L7 Waste Gas Stack

What to do	Why to do it
CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS) Requirements  (See additional CEMS requirements in Table A under Subject Item: Total Facility, Section F, and Subject Items MR 001 through MR 004; and in Table B)	hdr
Initial Startup of the Monitor: due 30 days after 12/22/2008 . Monitor is the continuous emission monitoring system (CEMS), which is defined as the total equipment used to sample, condition (if applicable), analyze, and provide a permanent record of emissions of NOx and SO2 in lb/hr.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1006.
CEM Certification Test: due 90 days after Excess Emissions/Downtime Reports (EER's) are first required. The first EER is due 30 days after the end of the calendar quarter following Permit Issuance. Follow the Performance Specifications listed in 40 CFR 60, Appendix B. Note that some changes that affect the CEMS may require recertification.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1050, subp. 1.
CEMS Cylinder Gas Audit (CGA): due before end of each calendar quarter following CEM Certification Test, except that a CGA is not required during any calendar half year in which a RATA was performed. The initial CGA must be performed within 80 days following certification of the CEMS. The CGAs shall be conducted at least three months apart but no more than eight months apart. A CGA shall be conducted according to the procedures in 40 CFR 60, Appendix F, section 5.1.2. If the monitored emission unit was operated for less than 24 hours during the calendar half year, a CGA is not required for that calendar half year.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 4.
CEMS Relative Accuracy Test Audit (RATA): due before end of each calendar year following CEM Certification Test. A RATA is not required in any calendar year if a RATA conducted in the previous year demonstrated a relative accuracy value of less than 15 percent or if the associated emission unit operated less than 48 hours during the calendar year. If the exception is used, the next RATA shall be conducted during the first half of the following calendar year. RATAs shall be conducted at least 3 months apart according to 40 CFR 60, Appendix F, section 5.1.1.	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1170, subp. 5.
Excess Emissions/Downtime Reports (EER's): due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter. { This is a reminder; the same requirement can be found in Table B of this permit. }	Title I Conditions: to monitor NOx mitigation for Class I visibility impacts from pellet induration; 40 CFR 52.21 (p); Minn. R. 7007.3000; Minn. R. 7017.1110, subp. 1 and 2.

## TABLE B: SUBMITTALS

B-1 06/05/13

Facility Name: US Steel Corp - Minntac  
Permit Number: 13700005 - 006

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

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

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

Chief Air Enforcement  
Air and Radiation Branch  
EPA Region V  
77 West Jackson Boulevard  
Chicago, Illinois 60604

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

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

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

Send any application for a permit or permit amendment to:

Fiscal Services  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

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.

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

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-2** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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 Emissions Control Plan	<p>due 60 days after 02/26/2003 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 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 (the screen at EU 285).	SV131
Operation and Maintenance Plan	due 120 days after 02/26/2003 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, SV131
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, SV131

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-3** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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, 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, SV131
Relative Accuracy Test Audit (RATA) Results Summary	due 45 days after CEMS Relative Accuracy Test Audit (RATA).	MR001, MR002, MR003, MR004, MR005
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 of Permit Application	due 60 days after receipt of written MPCA approval of NOx emission control pilot testing results, for a major permit amendment to install a control technology at one Agglomerator line for a full scale demonstration.  The Permittee shall submit a schedule of equipment installation, anticipated startup, and final reporting of the demonstration within 60 days of receipt of the Permit from the MPCA.	Total Facility
Submittal of Permit Application	due 60 days after receipt of written MPCA approval of the final report on control technology demonstration on Line 4 (EU 261) and Line 5 (EU 282) for a major permit amendment to install the demonstrated control technology on the remaining Agglomerator lines.  The Permittee shall submit a schedule of equipment installation and anticipated startup of individual lines within 60 days of receipt of the Permit from the MPCA.	Total Facility
Submittal	due 1096 days after 02/26/2003 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. For each of Lines 4 and 5, the plan shall specify a testing frequency for fluorides, CO, and VOC 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.	GP010

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-4** 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

Testing Frequency Plan	due 60 days after Initial Performance Test. For each of Lines 6 and 7, the plan shall specify a testing frequency for fluorides, CO, and VOC 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.	GP011
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
Testing Frequency Plan	due 60 days after Initial Performance Test. The plan shall specify a testing frequency for fluorides, CO, and VOC 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.	GP009

**TABLE B: RECURRENT SUBMITTALS**

B-5 06/05/13

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005 - 006

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
Cylinder Gas Audit (CGA) Results Summary	due 30 days after end of each calendar quarter following end of the calendar quarter in which the Audit was performed. A CGA is not required during any calendar quarter in which a RATA was performed.	MR001, MR002, MR003, MR004, MR005
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Initial Startup of the Monitor. Submit Deviations Reporting Form DRF-1 as amended. The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e., during startup, shutdown, and malfunctions. The EER must be submitted even if there were no excess emissions, downtime or bypass during the quarter.	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, SV131
Semiannual Deviations Report	due 30 days after end of each calendar half-year starting 02/26/2003. 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 starting 02/26/2003 (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 starting 02/26/2003 (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

## APPENDIX MATERIAL

Facility Name: US Steel Corp - Minntac

Permit Number: 13700005-006

1. Types of Biomass Authorized for the Rotary Kiln Burner at Minntac
2. Visible Emission Checklists (for Permit No. 13700005-001)
3. Minntac Modeling Parameters (for Permit No. 13700005-004)

## **1. Types of Biomass Authorized for the Rotary Kiln Burner at Minntac**

The following materials are allowed to be fed to the rotary kiln burner at Agglomerator Lines 3 through 7 at U.S. Steel Minntac.

### Wood based

- Cedar chips without bark attached
- Cedar chips with some bark attached
- Pine chips without bark attached
- Planed chips from clean unadulterated wood
- Bark
- Logging residue
- Sawdust from clean unadulterated wood
- Sander dust from clean unadulterated wood

### Agricultural Based

- Millet hulls
- Sunflower hulls
- Sunflower screenings
- Corn stover
- Rice hull
- Oat hulls
- Distiller's grain
- Flour dust screenings
- Elevator screenings of wheat, soy, and oat
- Hay
- A small portion of unspecified types of grasses



## 2. VISIBLE EMISSION CHECKLISTS (for Permit No. 13700005-001)

## 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.

## An example checklist & instructions

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.

[illegible]

				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

### 3. Minntac Modeling Parameters for the Indurating Process Modification

(for Permit No. 13700005-004; still relevant to Permit No. 13700005-005)

June 7, 2005 Class I increment model inputs (with 13,300 ton NO<sub>x</sub> /yr)

Line 3 values are for old configuration – that was without a wet scrubber or a multiclone.

Stack Information			Emissions, lb/hr		Modeled Parameters			
MPCA ID	Plant ID	Description	PM <sub>10</sub> *	NO <sub>x</sub>	Stack Height**, ft	Stack Exit Temp, °F	Velocity at Exit, ft/m in	Stack Exit Diameter, ft
SV 103	247-03-1	Line 3 waste gas	190	484	116	224	4825.6	10
SV 118	247-04-1	Line 4 waste gas	68.2	670	136	125	3925.6	14
SV 127	247-05-1	Line 5 waste gas	68.2	670	136	125	3925.6	14
SV 144	247-06-1	Line 6 waste gas	81.6	670	142.25	110	2238.1	16
SV 151	247-07-1	Line 7 waste gas	81.6	670	142.25	110	2238.1	16

\* Both filterable and condensable are included in the PM<sub>10</sub> emission rate modeled.

\*\* Stack height above the ground.

January 24, 2005 Regional Haze model inputs (post-modification)

Line 3 values are for old configuration – that was without a wet scrubber or a multiclone.

<b>Post-modification with NO<sub>x</sub> at 13,300 ton/yr*</b>	Line 3	Line 4	Line 5	Line 6	Line 7
SO <sub>2</sub> (lb/hr)	224.7	174.7	174.7	272.7	272.7
Primary SO <sub>4</sub> (lb/hr)	26.9	22.3	22.3	26.8	26.8
NO <sub>x</sub> (lb/hr)	484.0	670.0	670.0	670.0	670.0
PM <sub>10</sub> filterable (lb/hr)	162.2	44.2	44.2	52.8	52.8
PM <sub>10</sub> condensable (lb/hr)	27.8	24.0	24.0	28.8	28.8
Organic carbon (lb/hr)	1.0	1.7	1.7	2.0	2.0
Elemental carbon (lb/hr)	0.5	0.7	0.8	3.5	3.5
Other particulate (lb/hr)	161.8	43.5	43.4	49.3	49.3

\* Annual emissions for NO<sub>x</sub> are based on hourly averages calculated on a 12-month rolling sum.

January 24, 2005 Regional Haze model inputs (pre-modification)

<b>Pre-modification Annual Emissions</b>	Line 3	Line 4	Line 5	Line 6	Line 7
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SO <sub>2</sub> (lb/hr)	0.0	192.0	190.0	318.0	315.0
Primary SO <sub>4</sub> (lb/hr)	0.0	36.0	25.0	17.0	16.0
NO <sub>x</sub> (lb/hr)	0.0	569.0	528.0	305.0	305.0
PM <sub>10</sub> filterable (lb/hr)	0.0	470.0	320.0	34.0	33.0
PM <sub>10</sub> condensable (lb/hr)	0.0	38.0	26.0	18.0	18.0
Organic carbon (lb/hr)	0.0	0.9	0.6	1.3	1.3
Elemental carbon (lb/hr)	0.0	0.0	0.0	1.7	1.7
Other particulate (lb/hr)	0.0	470.0	320.0	32.3	31.3