

**AIR EMISSION PERMIT NO. 13700061- 003**

**IS ISSUED TO**

Hibbing Taconite Co

**HIBBING TACONITE CO**

Highway 5 North  
Hibbing, St. Louis County, MN 55746

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

Permit Type	Application Date
Total Facility Operating Permit – Reissuance	August 31, 2006 (received 9/1/2006)
Major Amendment	February 29, 2008 (received 3/3/2008)
Revised Major Amendment	September 8, 2008 (received 9/9/2008)
Administrative Amendment	May 13, 2009 (received 5/15/2009)

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

**Permit Type:** Federal; Pt 70/NSR Authorization

**Final Permit Issuance Date:** January 14, 2010

**Expiration:** January 14, 2015

Title I Conditions do not expire.

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Christopher Nelson, P.E., Manager  
Metallic Mining Sector  
Industrial Division

for Paul Eger  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Appendices:**

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

**B – Visible Emissions Checklist**

**C – Insignificant Activities (Required to be Listed)**

**D - Modeling Input Parameters (submitted on April 9, 1998)**

**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:**

Hibbing Taconite Company (HTC) is the owner and operator of a taconite ore mine and beneficiation facility located in Hibbing, Minnesota. The facility is located in St. Louis County, which is designated as attainment or unclassified for federal criteria pollutants. The existing facility is classified as a major emission source with respect to the federal Prevention of Significant Deterioration program. The facility is also a major source of hazardous air pollutants (HAPs) because potential emissions of HAPs exceed the major source thresholds of 10 tons per year (tpy) of any individual HAP and 25 tpy of total HAPs.

The facility was constructed in two phases. Phase I construction began in 1974, with operation beginning in 1976. Phase I consists of one crusher, six autogenous mill lines, two stages of magnetic separation – rougher and finisher, two Dravo-Lurgi straight grate pellet indurating furnaces, and associated processing and material handling equipment.

Phase II construction began in 1976, with operations beginning in 1979. Phase II consists of one crusher, three autogenous grinding mill lines, two stages of magnetic separation, one Dravo-Lurgi straight grate indurating furnace, and associated processing and material handling equipment.

The three pellet indurating furnaces are functionally equivalent, each one producing, on average, the same production. Hibbing Taconite has the capability to produce up to 9 million dry long tons of pellets, which equates to approximately 10.1 million dry short tons (1 long ton = 2,240 lbs).

To produce 8.0 million dry long tons of pellets, approximately 32 million wet long tons of taconite ore must be processed. Stripping (including the overburden, the rock and the low-grade taconite that cannot be economically processed) must be removed prior to hauling the taconite ore. During 1994-1998, Hibbing Taconite averaged nearly 50 million long tons (56 million short tons) of all material (taconite and stripping) annually.

All three furnaces at the facility use natural gas as the primary fuel. Also, all grades of fuel oil and used oil may be used.

## **Permit Action 003 Description:**

This permit action is for a reissuance of the Part 70 permit based on the application dated August 31, 2006. It incorporates a major amendment application dated February 29, 2008, a subsequent revision to the major amendment application dated September 8, 2008, and an administrative amendment application dated May 13, 2009, as tabulated in the cover page of this permit.

The permit authorizes the replacement/modification of the lower burners on three indurating furnaces, the installation of a large diesel generator and determination that the generator is a non-road engine, the installation of several portable heaters, and a 365-day extension of the required Title V performance testing deadline.

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

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

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

<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, subps. 7A, 7L & 7M; 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.	40 CFR 63.9591; Minn. R. 7011.0150
Comply with Fugitive Emissions Control Plan: The Permittee shall follow the actions and record keeping specified in the Fugitive Emissions control 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 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. 7007.0100; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150; Minn. R. 7009.0020; 40 CFR 63.9591
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance (O & M) plan for all air pollution control equipment. At a minimum, the O&M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subps. 14 and 16(J)
Operation and Maintenance Plan (continued):  Update the O & M Plan as necessary to include: 1) a description of the monitoring device; 2) test results which demonstrate compliance; 3) appropriate operating parameters demonstrating compliance (these are specified under "Pollution Control Equipment Limits" in this permit at Group Level); 4) procedures for demonstrating initial and continuous compliance with the corresponding limits.	Minn. R. 7007.0800, subps. 14 and 16(J)  (continued)
Comply with the Operation and Maintenance Plan: Follow the actions and recordkeeping specified in the O & M Plan.	40 CFR 63.9600; Minn. R. 7007.0800, subp. 4(D); 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. (This requirement is also repeated in this permit for GP 001 through GP 005.)	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
<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

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Changing operating parameters:  Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3, or a representative unit within the same test group as specified by the applicable requirement. The limit is final upon issuance of a permit amendment incorporating the change.	40 CFR Section 63.9622(f); Minn. R. 7011.8030; Minn. R. 7017.2025, subp. 3
Operating Conditions for Performance Testing:  A) Performance Testing for the Primary Crusher and Concentrator Units (EU001 - EU013 and the associated control equipment and stacks) shall be conducted at a production rate to be determined from the projected Annual Production Rate for the year that the test is performed. Performance tests shall be conducted at a minimum of 90% of the estimated capacity of each unit based on the variables used in the Annual Production Rate projection. The test plan shall quantify the variables and show the calculation method used to determine the proposed operating rate for each test.  B) Performance Testing for the Straight Grate Furnaces and associated emission units (EU018 - EU025 and the associated control equipment and stacks) shall be conducted at a minimum of 90% of 430 short tons per hour for each furnace.  C) all other required performance tests shall be conducted at a minimum of 90% of the rated capacity of the emission unit.	Minn. R. 7017.2025
Operating Conditions for Performance Testing (continued):  D) If a performance test is conducted at less than the applicable minimum as defined in (A) - (C) the Permittee shall be given the opportunity to retest within 90 days of the subject test before process limits can be applied as specified in Minn. R. 7017.2025, subp. 3.	Minn. R. 7017.2025
Performance Test Notification (written): due 30 days before Performance Test.	Minn. R. 7017.2020, subp. 1
Performance Test Plan: due 30 days before Performance Test.	Minn. R. 7017.2020, subps. 2 and 3
Performance Test Pre-test Meeting: due 7 days before Performance Test.	Minn. R. 7017.2020, subp. 4
Performance Test Report: due 45 days after Performance Test.	Minn. R. 7017.2020, subps. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after Performance Test. A CD-ROM copy of the test report shall be accepted as an alternative to the microfiche copy, provided that the test report in the CD-ROM is in PDF or TIF format to address compatibility issues.	Minn. R. 7017.2020, subp. 2
C. MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
Visible Emissions Training: The Permittee shall  1) maintain a plant employee on site that has been certified in EPA Method 9 within the past three years.  or  2) employ a similarly certified contractor.  This person will train other plant employees to perform daily visible emissions observations as detailed in the O&M Plan and Fugitive Control Plan. If the Permittee installs Agency approved broken bag detectors on the control equipment required to have visible emissions observations done, the Permittee may use the broken bag detectors in place of the visible emissions observations and the Permittee is not required to implement 1) and 2) above.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
D. RECORD KEEPING REQUIREMENTS	hdr

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007. 1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007. 0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
If the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. These records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
Contractors: The Permittee shall retain records on site of all contractors that are allowed on site and have equipment that include crushers, screens, and/or conveyors. The Permittee shall also retain records on site of all contractors whose operations require an Air Emissions Permit from the MPCA. The records shall include the contractor's company name, the MPCA Air Emissions Permit number, a short description of activities undertaken by the contractor, an estimate of the air emissions from the activity or the amount of material handled, and the dates the contractor was on site. These records shall be updated at least monthly.	Minn. R. 7007.0800, subp. 2
Contractors (cont'd) The Permittee shall evaluate if the activities of any contractor require NSR permitting prior to the contractor performing such activities. If a contractor has their own permit, but it is determined that the contractor is under the common control of the Permittee then the contractor's permit does not shield the Permittee or the contractor from the permit regulations or enforcement of NSR and/or Part 70.	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
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
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3.  At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.  At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. The Permittee shall submit this on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
Deviations. An excursion from an established daily average operating parameter will be reported as a daily deviation. If the daily average operating parameter value for an emission unit or group of similar emission units does not meet the corresponding established operating limit, the Permittee shall report this as a deviation and follow corrective actions to restore the equipment and practices to proper operation to meet applicable permit conditions. This does not apply to compliance with the Taconite MACT. Taconite MACT compliance shall be determined according to the applicable requirements and regulations in this permit and in 40 CFR Pt. 63, Subp. RRRRR.	40 CFR Section 64.9: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7011.0610; Minn. R. 7007.0800, subp. 6
F. DETERMINING IF A PROJECT/MODIFICATION IS SUBJECT TO NEW SOURCE REVIEW	hdr
These requirements apply where there is a reasonable possibility (as defined in 40 CFR Section 52.21(r)(6)(vi)) that a proposed project, analyzed using the actual-to-projected-actual (ATPA) test (either by itself or as part of the hybrid test described in Section 52.21(a)(2)(iv)(f)) and found to not be part of a major modification, may result in a significant emissions increase. If the ATPA test is not used for a particular project, or if there is not a reasonable possibility that the proposed project could result in a significant emissions increase, then these requirements do not apply to that project.  Even though a particular modification is not subject to New Source Review, or where there isn't a reasonable possibility that a proposed project could result in a significant emissions increase, a permit amendment, recordkeeping, or notification may still be required under Minn. R. 7007.1150 - 7007.1500.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
Preconstruction Documentation -- Before beginning actual construction on a project, the Permittee shall document the following:  1. Project description 2. Identification of any emission unit (EU) whose emissions of an NSR pollutant could be affected 3. Pre-change potential emissions of any affected existing EU, and the projected post-change potential emissions of any affected existing or new EU. 4. A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including the baseline actual emissions, the projected actual emissions, the amount of emissions excluded due to increases not associated with the modification and that the EU could have accommodated during the baseline period, an explanation of why the amounts were excluded, and any creditable contemporaneous increases and decreases that were considered in the determination.  The Permittee shall maintain records of this documentation.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.1200, subp. 4; Minn. R. 7007.0800, subps. 4 & 5
The Permittee shall monitor the actual emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using the ATPA test, and the potential emissions of any regulated NSR pollutant that could increase as a result of the project and that were analyzed using potential emissions in the hybrid test. The Permittee shall calculate and maintain a record of the sum of the actual and potential (if the hybrid test was used in the analysis) emissions of the regulated pollutant, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations after the change if the project increases the design capacity of or potential to emit of any unit associated with the project.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
The Permittee must submit a report to the Agency if the annual summed (actual, plus potential if used in hybrid test) emissions differ from the preconstruction projection and exceed the baseline actual emissions by a significant amount as listed at 40 CFR Section 52.21(b)(23). Such report shall be submitted to the Agency within 60 days after the end of the year in which the exceedances occur. The report shall contain:  a. The name and ID number of the facility, and the name and telephone number of the facility contact person b. The annual emissions (actual, plus potential if any part of the project was analyzed using the hybrid test) for each pollutant for which the preconstruction projection and significant emissions increase are exceeded. c. Any other information, such as an explanation as to why the summed emissions differ from the preconstruction projection.	Title I Condition: 40 CFR Section 52.21(r)(6); Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 & 5
G. PERMIT APPENDICES	hdr



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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Permit Appendices: This permit contains Appendices B (Visible Emissions Checklist), C (Insignificant Activities), and D (Modeling Input Parameters) as listed in the permit Table of Contents. The Permittee shall comply with all requirements contained in the appendices.	Minn. R. 7007.0800, subp. 2
H. MISCELLANEOUS	hdr
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
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
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-6

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** GP 001 Crushing

**Associated Items:** CE 001 Venturi Scrubber

CE 002 Venturi Scrubber

CE 003 Venturi Scrubber

CE 004 Venturi Scrubber

EU 001 Phase I Apron Feeder

EU 002 Phase II Apron Feeder

EU 003 Phase I Primary Ore Conveyor - Tail

EU 004 Phase II Primary Ore Conveyor - Tail

SV 001

SV 002

SV 003

What to do	Why to do it
<b>POLLUTANT LIMITS</b>	hdr
Front-half Particulate Matter: less than or equal to 0.008 grains/dry standard cubic foot using 6-hour Average and on the basis of a flow-weighted mean concentration. For each ore crushing and handling source, the Permittee shall determine the flow-weighted mean concentration of particulate matter emissions from all emission units in each affected source following the procedures in 40 CFR Section 63.9621(b).	40 CFR Section 63.9590(a); 40 CFR Section 63.9621(b); 40 CFR Section 63.9623(a)(1); Minn. R. 7011.8030
The pollutant limits apply to each individual emission unit, stack/vent, and piece of control equipment listed under the Associated Items.	Minn. R. 7007.0800, subp. 2
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>POLLUTION CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Wet Scrubber Monitoring: 1) maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance tests; 2) operate and maintain each Continuous Parameter Monitoring System (CPMS) according to the O & M plan and record all information needed to document conformance with these requirements; 3) collect and reduce monitoring data for pressure drop and scrubber water flow rate according to the O & M plan and record all information needed to document conformance with these requirements.	40 CFR 63.9580 to 63.9652; 40 CFR Section 64.7(e) and 40 CFR Section 64.9(a); CAM and Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4(D), subp. 14, and subp. 16(J)
Inspect quarterly, or as required by the O&M plan and manufacturer specifications, all components that are not subject to wear or plugging, including structural components, housings, ducts, and hoods. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect monthly, or as required by the O&M plan and manufacturer specifications, all components that are subject to wear or plugging. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

<p>Alternate Operating Scenario: The Permittee is allowed to change the location of the pickup points of CE003 and CE004 in an effort to improve the collection of particulate from EU003 and EU004.</p> <p>If an effective location for the pickup points can not be found, CE003 and CE004 may be removed from service without a permit as long as the unrestricted net emission change due to this action is not over the significant emission rates for PSD. Otherwise the removal of CE003 and CE004 from operation would require a major amendment.</p>	Minn. R. 7007.0800, subp. 11
PERFORMANCE TESTING REQUIREMENTS	hdr
<p>Performance testing frequency requirements for each emission unit are listed below and at the control equipment (CE) level for the associated scrubber.</p> <p>Additional performance testing requirements are found in GP008 and GP009.</p>	Minn. R. 7017.2020, subp. 1
<p>Performance Test: due before end of each 60 months starting 06/22/2004 on one stack in this group in rotation to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/22/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.</p> <p>Parametric operating limits are found at the CE level.</p>	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 002 Concentrating**

**Associated Items:** CE 005 Wet Scrubber-High Efficiency  
 CE 006 Wet Scrubber-High Efficiency  
 CE 007 Wet Scrubber-High Efficiency  
 CE 008 Wet Scrubber-High Efficiency  
 CE 009 Wet Scrubber-High Efficiency  
 CE 010 Wet Scrubber-High Efficiency  
 CE 011 Wet Scrubber-High Efficiency  
 CE 012 Wet Scrubber-High Efficiency  
 CE 013 Wet Scrubber-High Efficiency  
 EU 005 Line No 1 Mill Feed Conveyor  
 EU 006 Line No 2 Mill Feed Conveyor  
 EU 007 Line No 3 Mill Feed Conveyor  
 EU 008 Line No 4 Mill Feed Conveyor  
 EU 009 Line No 5 Mill Feed Conveyor  
 EU 010 Line No 6 Mill Feed Conveyor  
 EU 011 Line No 7 Mill Feed Conveyor  
 EU 012 Line No 8 Mill Feed Conveyor  
 EU 013 Line No 9 Mill Feed Conveyor  
 SV 004  
 SV 005  
 SV 006  
 SV 007  
 SV 008  
 SV 009  
 SV 010  
 SV 011  
 SV 012

What to do	Why to do it
POLLUTANT LIMITS	hdr
Front-half Particulate Matter: less than or equal to 0.008 grains/dry standard cubic foot using 6-hour Average and on the basis of a flow-weighted mean concentration. For each ore crushing and handling source, the Permittee shall determine the flow-weighted mean concentration of particulate matter emissions from all emission units in each affected source following the procedures in 40 CFR Section 63.9621(b).	40 CFR Section 63.9590(a); 40 CFR Section 63.9621(b); 40 CFR Section 63.9623(a)(1); Minn. R. 7011.8030
The pollutant limits apply to each individual emission unit, stack/vent, and piece of control equipment listed under the Associated Items.	Minn. R. 7007.0800, subp. 2
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0715, subp. 3

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>POLLUTION CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Wet Scrubber Monitoring: 1) maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance tests; 2) operate and maintain each CPMS according to the O & M plan and record all information needed to document conformance with these requirements; 3) collect and reduce monitoring data for pressure drop and scrubber water flow rate according to the O & M plan and record all information needed to document conformance with these requirements.	40 CFR 63.9580 to 63.9652; 40 CFR Section 64.7(e) and 40 CFR Section 64.9(a): CAM and Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4(D), subp. 14, and subp. 16(J)
Inspect quarterly, or as required by the O&M plan and manufacturer specifications, all components that are not subject to wear or plugging, including structural components, housings, ducts, and hoods. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect monthly, or as required by the O&M plan and manufacturer specifications, all components that are subject to wear or plugging. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
<b>PERFORMANCE TESTING REQUIREMENTS</b>	hdr
Performance testing frequency requirements for each emission unit are listed below and at the control equipment (CE) level for the associated scrubber.	Minn. R. 7017.2020, subp. 1
Additional performance testing requirements are found in GP008 and GP009.	
Performance Test: due before end of each 60 months starting 06/23/2004 on two stacks from this group in rotation to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/23/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3
Parametric operating limits are found at the CE level.	

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 003 Furnaces Nos. 1-3**

**Associated Items:**

CE 022 Venturi Scrubber

CE 023 Venturi Scrubber

CE 024 Venturi Scrubber

CE 025 Venturi Scrubber

CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 027 Venturi Scrubber

CE 028 Venturi Scrubber

CE 029 Venturi Scrubber

CE 030 Venturi Scrubber

CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 032 Venturi Scrubber

CE 033 Venturi Scrubber

CE 034 Venturi Scrubber

CE 035 Venturi Scrubber

CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

EU 020 Pellet Indurating Furnace Line No 1

EU 021 Pellet Indurating Furnace Line No 2

EU 022 Pellet Indurating Furnace Line No 3

SV 021

SV 022

SV 023

SV 024

SV 025

SV 026

SV 027

SV 028

SV 029

SV 030

SV 031

SV 032

What to do	Why to do it
FUEL CONSUMPTION	hdr
<p>Fuel Usage: less than or equal to 3810000 million Btu/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12-month period for the three indurating furnaces together unless the 12-month rolling sum for fuel consumption exceeds 3,600,000 million Btu.</p> <p>In that case, the 365-day rolling sum fuel usage will be determined daily until the 365-day rolling sum falls below 3,400,000 million Btu.</p>	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000
POLLUTANT LIMITS	hdr

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Front-half Particulate Matter: less than or equal to 0.01 grains/dry standard cubic foot using 6-hour Average and on the basis of a flow-weighted mean concentration. For each indurating furnace source, the Permittee shall determine the flow-weighted mean concentration of particulate matter emissions from all emission units in each affected source following the procedures in 40 CFR Section 63.9621(c).	40 CFR Section 63.9590(a); 40 CFR Section 63.9621(c); 40 CFR Section 63.9623(a)(2); Minn. R. 7011.8030
The following requirements apply to each individual emission unit, stack/vent, and piece of control equipment listed under the Associated Items.	Minn. R. 7007.0800, subp. 2
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0610, subp. 1(A)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0610, subp. 1(A)(2)
Sulfur Dioxide: less than or equal to 4 lbs/million Btu heat input if a solid fossil fuel is burned or 2 pounds per million Btu heat input if a liquid fossil fuel is burned	Minn. R. 7011.0610, subp. 2
Sulfur Content of Fuel: less than or equal to 0.10 percent by weight when burning any grade of fuel oil	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000
Sulfur Content of Fuel: less than or equal to the applicable limit above, based on fuel type, minus 0.75 lb SO <sub>2</sub> /MMBtu which accounts for the contribution of SO <sub>2</sub> from the pellets.	Minn. R. 7007.0800, subp. 4 & 5
Fuel Limits: The Permittee shall combust only natural gas, all grades of fuel oil, and used oil in these emission units. Other materials may be combusted in these emission units for a short period of time during a trial burn as approved by an amendment to this permit.	Minn. R. 7007.0800, subp. 2
Fuel Recordkeeping: the Permittee shall record the amount of liquid fuels burned each day in each furnace. The amount of natural gas consumed in each furnace shall be recorded by the 15th day of the month for the previous month. The Permittee shall obtain a fuel supplier certification of the sulfur content and heat value of the liquid fuels. Alternatively the Permittee may sample the liquid fuels from the tanks with each new shipment, but not more than once per calendar week if multiple deliveries are made. The Permittee shall analyze the sample according to the current ASTM methods. While burning used oil the Permittee shall follow all hazardous waste rules including, but not limited to, Minn. R. 7045.0885.	Minn. R. 7007.0800, subp. 4(B)
<b>RECORDKEEPING</b>	hdr
Fuel Supplier Certification: The Permittee shall obtain and maintain a fuel supplier certification for each shipment of fuel oil, certifying that the sulfur content does not exceed 0.10% by weight.	Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall retain these certifications for five years.	
Fuel Oil Consumption: On a daily basis, the Permittee shall record the gallons of fuel oil consumed by the indurating furnaces in GP003 (EU020, EU021, and EU022). (This also applies on days when no fuel oil is consumed.)	Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall retain these records for five years.	
Natural Gas Consumption: On a daily basis, the Permittee shall record the cubic feet of natural gas consumed by the indurating furnaces in GP003 (EU020, EU021, and EU022). (This also applies on days when no natural gas is consumed.)	Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall retain these records for five years.	
Energy (Btu) Consumption: On a daily basis, the Permittee shall record the energy content of the fuels consumed in the indurating furnaces in GP003 (EU020, EU021, EU022). (This also applies on days when no fuel is consumed.)	Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall assume the energy content of Natural Gas is 1020 Btu/standard cubic foot. The Permittee shall assume the energy content of Fuel Oil is 150000 Btu/gallon.	
The Permittee shall retain these records for five years.	
<b>POLLUTION CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Inspect quarterly, or as required by the O&M plan and manufacturer specifications, all components that are not subject to wear or plugging, including structural components, housings, ducts, and hoods. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect monthly, or as required by the O&M plan and manufacturer specifications, all components that are subject to wear or plugging. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Scrubbers	hdr
Wet Scrubber Monitoring: 1) maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance tests; 2) operate and maintain each CPMS according to the O & M plan and record all information needed to document conformance with these requirements; 3) collect and reduce monitoring data for pressure drop and scrubber water flow rate according to the O & M plan and record all information needed to document conformance with these requirements.	40 CFR 63.9580 to 63.9652; 40 CFR Section 64.7(e) and 40 CFR Section 64.9(a); CAM and Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4(D), subp. 14, and subp. 16(J)
Multiclones	hdr
Multiclone Pressure Drop Monitoring: 1) maintain the daily average pressure drop at or above the minimum levels established during the initial or subsequent performance tests; 2) operate and maintain each CPMS according to the O & M plan and record all information needed to document conformance with these requirements; 3) collect and reduce monitoring data for pressure drop according to the O & M plan and record all information needed to document conformance with these requirements.	40 CFR 63.9580 to 63.9652; 40 CFR 64; Minn. R. 7007.0800, subp. 4(D), subp. 14, and subp. 16(J)
PERFORMANCE TESTING REQUIREMENTS	hdr
Performance testing frequency requirements for each emission unit are listed below and at the control equipment (CE) level for the associated scrubber.  Additional performance testing requirements are found in GP008 and GP009.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 06/23/2004 on all stacks associated with one EU in this group in rotation to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the Direct Heating Fossil-Fuel-Burning Equipment emission limitations and to revise the parametric operating limits associated with Direct Heating Rule compliance. The performance test due 6/23/09 on EU021 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.  Parametric operating limits are found at the CE level.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3
Performance Test: due 120 days after Startup of EU020 (Pellet Indurating Furnace Line No. 1) following replacement or modification of the lower burners. The Permittee shall conduct a performance test for NOx simultaneously on all four stacks associated with EU020. During the NOx performance test, the Permittee shall monitor and record the input parameters associated with the Predictive Emission Monitoring System for Nitrogen Oxides and include the data in the performance test report. This testing requirement is to confirm the NOx emission factor used in the netting analysis.	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000
Performance Test: due 120 days after Startup of EU021 (Pellet Indurating Furnace Line No. 2) following replacement or modification of the lower burners. The Permittee shall conduct a performance test for NOx simultaneously on all four stacks associated with EU021. During the NOx performance test, the Permittee shall monitor and record the input parameters associated with the Predictive Emission Monitoring System for Nitrogen Oxides and include the data in the performance test report. This testing requirement is to confirm the NOx emission factor used in the netting analysis.	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000
Performance Test: due 120 days after Startup of EU022 (Pellet Indurating Furnace Line No. 3) following replacement or modification of the lower burners. The Permittee shall conduct a performance test for NOx simultaneously on all four stacks associated with EU022. During the NOx performance test, the Permittee shall monitor and record the input parameters associated with the Predictive Emission Monitoring System for Nitrogen Oxides and include the data in the performance test report. This testing requirement is to confirm the NOx emission factor used in the netting analysis.	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000



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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 004 Pelletizing - Scrubbers**

**Associated Items:**

- CE 018 Wet Scrubber-High Efficiency
- CE 019 Wet Scrubber-High Efficiency
- CE 020 Wet Scrubber-High Efficiency
- CE 021 Wet Scrubber-High Efficiency
- CE 037 Wet Scrubber-High Efficiency
- CE 038 Wet Scrubber-High Efficiency
- CE 039 Wet Scrubber-High Efficiency
- CE 040 Wet Scrubber-High Efficiency
- CE 041 Wet Scrubber-High Efficiency
- EU 018 Phase I Hearth Layer Bin/Layer Feed
- EU 019 Phase II Hearth Layer Bin/Layer Feed
- EU 023 Pellet Machine Discharge Line No 1
- EU 024 Pellet Machine Discharge Line No 2
- EU 025 Pellet Machine Discharge Line No 3
- EU 026 Pellet Hearth Layer Screening
- EU 027 Pellet Transfer House
- SV 017
- SV 018
- SV 019
- SV 020
- SV 033
- SV 034
- SV 035
- SV 036
- SV 037

What to do	Why to do it
The following requirements apply to each individual emission unit, stack/vent, and piece of control equipment listed under the Associated Items.	Minn. R. 7007.0800, subp. 2
POLLUTANT LIMITS	hdr
Front-half Particulate Matter: less than or equal to 0.008 grains/dry standard cubic foot using 6-hour Average and on the basis of a flow-weighted mean concentration. For each finished pellet handling source, the Permittee shall determine the flow-weighted mean concentration of particulate matter emissions from all emission units in each affected source following the procedures in 40 CFR Section 63.9621(b).	40 CFR Section 63.9590(a); 40 CFR Section 63.9621(b); 40 CFR Section 63.9623(a)(3); Minn. R. 7011.8030
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Wet Scrubber Monitoring: 1) maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial and subsequent performance tests; 2) operate and maintain each CPMS according to the O & M plan and record all information needed to document conformance with these requirements; 3) collect and reduce monitoring data for pressure drop and scrubber water flow rate according to the O & M plan and record all information needed to document conformance with these requirements.	40 CFR 63.9580 to 63.9652; 40 CFR Section 64.7(e) and 40 CFR Section 64.9(a); CAM and Minn. R. 7017.0200; Minn. R. 7007.0800, subp. 4(D), subp. 14, and subp. 16(J)
Inspect quarterly, or as required by the O&M plan and manufacturer specifications, all components that are not subject to wear or plugging, including structural components, housings, ducts, and hoods. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect monthly, or as required by the O&M plan and manufacturer specifications, all components that are subject to wear or plugging. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Alternate Operating Scenario: The Permittee is allowed to change the location of the pickup points of CE 020 in an effort to improve the collection of particulate from EU 018.  If an effective location for the pickup points can not be found, CE020 may be removed from service without a permit as long as the unrestricted net emission change due to this action is not over the significant emission rates for PSD. Otherwise the removal of CE020 from operation would require a major amendment.	Minn. R. 7007.0800, subp. 11
PERFORMANCE TESTING REQUIREMENTS	hdr
Performance testing frequency requirements for each emission unit are listed below and at the control equipment (CE) level for the associated scrubber.  Additional performance testing requirements are found in GP008 and GP009.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months starting 06/24/2004 in rotation (SV017, SV019) to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/24/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.  Parametric operating limits are found at the CE level.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3
Performance Test: due before end of each 60 months starting 06/24/2004 in rotation (SV018, SV020) to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/24/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.  Parametric operating limits are found at the CE level.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3
Performance Test: due before end of each 60 months starting 06/24/2004 in rotation (SV033, SV034, SV035) to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/24/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.  Parametric operating limits are found at the CE level.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3
Performance Test: due before end of each 60 months starting 06/24/2004 on SV036 to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/24/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.  Parametric operating limits are found at the CE level.	40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Performance Test: due before end of each 60 months starting 06/24/2004 on SV037 to measure Total Particulate Matter and Opacity emissions to demonstrate compliance with the IPER emission limitations and to revise the parametric operating limits associated with IPER compliance. The performance test due 6/24/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.

Parametric operating limits are found at the CE level.

40 CFR Section 64.3: CAM and Minn. R. 7017.0200; Minn. R. 7017.2020, subp. 1; Minn. R. 7017.2025, subp. 3

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 005 Pelletizing - Baghouses****Associated Items:** CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 017 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 042 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 043 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

CE 044 Fabric Filter - Low Temperature, i.e., T&lt;180 Degrees F

EU 016 Phase I Bentonite Day Bins

EU 017 Phase II Bentonite Day Bins

EU 028 Bentonite Storage Silo - East

EU 029 Bentonite Storage Silo - West

EU 033 Limestone Storage Silo

SV 015

SV 016

SV 038

SV 039

SV 043

What to do	Why to do it
<b>POLLUTANT LIMITS</b>	hdr
The following requirements apply to each individual emission unit, stack/vent, and piece of control equipment listed under the Associated Items.	Minn. R. 7007.0800, subp. 2
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>POLLUTION CONTROL EQUIPMENT REQUIREMENTS</b>	hdr
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Parametric Monitoring: For each baghouse the Permittee shall either, 1) make daily visible emission checks or pressure drop readings when visible emission checks can not be performed, or 2) operate a broken bag detector.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Option 1 - Process Monitoring: a person who has been trained according to the requirement "Visible Emission Training" in the Total Facility section of this permit shall check the visible emissions from the stack once each operating day using a checklist that contains at a minimum the information in Appendix B. Evidence of visible emissions shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Option 1 - Gas Stream Pressure Drop: Upon installation of the pressure drop gauge, monitor and record the gas stream pressure drop at least once each operating day. Once the the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from this range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Option 2 - Broken Bag Detectors: If the Permittee uses a broken bag detector, an alarm of the detector shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect quarterly, or as required by the O&M plan and manufacturer specifications, all components that are not subject to wear or plugging, including structural components, housings, ducts, and hoods. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Inspect monthly, or as required by the O&M plan and manufacturer specifications, all components that are subject to wear or plugging. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Test: due before end of each 60 months starting 06/22/2004 on one stack -- alternated between SV015 and SV016 -- to measure Total Particulate and opacity emissions. The performance test due 6/22/09 was granted a 365 day extension or shall be conducted within 120 days after Resuming Operation, whichever occurs first. Future performance tests are due based on the initial performance test date.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance on one stack -- rotating among SV038, SV039, and SV043 -- to measure Total Particulate and opacity emissions.	Minn. R. 7017.2020, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

Subject Item: GP 006 Emergency Generators  
Associated Items: EU 031 Phase I Emergency Generator  
EU 032 Phase II Emergency Generator  
SV 041

What to do	Why to do it
OPERATING LIMITS	hdr
The Permittee may not operate EU031 (Phase I Emergency Generator) or EU032 (Phase II Emergency Generator).	Title I Condition: To avoid a major modification under 40 CFR 52.21 & Minn. R. 7007.3000

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 008 Point Sources and Fugitive Sources Subject to MACT**

**Associated Items:**

- CE 001 Venturi Scrubber
- CE 002 Venturi Scrubber
- CE 003 Venturi Scrubber
- CE 004 Venturi Scrubber
- CE 005 Wet Scrubber-High Efficiency
- CE 006 Wet Scrubber-High Efficiency
- CE 007 Wet Scrubber-High Efficiency
- CE 008 Wet Scrubber-High Efficiency
- CE 009 Wet Scrubber-High Efficiency
- CE 010 Wet Scrubber-High Efficiency
- CE 011 Wet Scrubber-High Efficiency
- CE 012 Wet Scrubber-High Efficiency
- CE 013 Wet Scrubber-High Efficiency
- CE 018 Wet Scrubber-High Efficiency
- CE 019 Wet Scrubber-High Efficiency
- CE 020 Wet Scrubber-High Efficiency
- CE 021 Wet Scrubber-High Efficiency
- CE 022 Venturi Scrubber
- CE 023 Venturi Scrubber
- CE 024 Venturi Scrubber
- CE 025 Venturi Scrubber
- CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 027 Venturi Scrubber
- CE 028 Venturi Scrubber
- CE 029 Venturi Scrubber
- CE 030 Venturi Scrubber
- CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 032 Venturi Scrubber
- CE 033 Venturi Scrubber
- CE 034 Venturi Scrubber
- CE 035 Venturi Scrubber
- CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 037 Wet Scrubber-High Efficiency
- CE 038 Wet Scrubber-High Efficiency
- CE 039 Wet Scrubber-High Efficiency
- CE 040 Wet Scrubber-High Efficiency
- CE 041 Wet Scrubber-High Efficiency
- EU 001 Phase I Apron Feeder
- EU 002 Phase II Apron Feeder

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

<b>Associated Items:</b>	EU 003 Phase I Primary Ore Conveyor - Tail
	EU 004 Phase II Primary Ore Conveyor - Tail
	EU 005 Line No 1 Mill Feed Conveyor
	EU 006 Line No 2 Mill Feed Conveyor
	EU 007 Line No 3 Mill Feed Conveyor
	EU 008 Line No 4 Mill Feed Conveyor
	EU 009 Line No 5 Mill Feed Conveyor
	EU 010 Line No 6 Mill Feed Conveyor
	EU 011 Line No 7 Mill Feed Conveyor
	EU 012 Line No 8 Mill Feed Conveyor
	EU 013 Line No 9 Mill Feed Conveyor
	EU 018 Phase I Hearth Layer Bin/Layer Feed
	EU 019 Phase II Hearth Layer Bin/Layer Feed
	EU 020 Pellet Indurating Furnace Line No 1
	EU 021 Pellet Indurating Furnace Line No 2
	EU 022 Pellet Indurating Furnace Line No 3
	EU 023 Pellet Machine Discharge Line No 1
	EU 024 Pellet Machine Discharge Line No 2
	EU 025 Pellet Machine Discharge Line No 3
	EU 026 Pellet Hearth Layer Screening
	EU 027 Pellet Transfer House
	FS 001 Truck Dump/Crusher Building
	FS 002 Primary Ore Conveyor to Shuttle Belt
	FS 003 Shuttle Belt to Crude Ore Stockpile
	FS 004 Wind Erosion - Crude Ore Stockpile
	FS 005 Non-Metallic Rock Transfer (Cobbed Rock)
	FS 006 Wind Erosion - Non-Metallic Rock Stockpile (Cobbed Rock)
	FS 007 Filter Cake Stockpiles Load
	FS 008 Filter Cake Reclaim Load
	FS 009 Filter Cake Wind Erosion
	FS 010 Pellet Bin Loading
	FS 011 Pellet Stockpiles Load
	FS 012 Pellet Reclaim Load
	FS 013 Pellet Wind Erosion
	FS 014 Cleaning - Steam Cleaning Vehicles/Parts/Buildings
	FS 016 Loading Overburden
	FS 017 Unloading Overburden
	FS 018 Wind Erosion Overburden
	FS 019 Drilling Rock
	FS 020 Loading Rock



# TABLE A: LIMITS AND OTHER REQUIREMENTS

A-21

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Associated Items:** FS 021 Unloading Rock  
 FS 022 Wind Erosion Rock  
 FS 023 Drilling Taconite Ore  
 FS 024 Loading Taconite Ore  
 FS 025 Hauling on Unpaved Haul Road, Overburden, Rock, Taconite, Misc.  
 FS 026 Non-Productive Material Transfers - Tailing, Rock, Crude Ore Emergency, Filter Cake, Pellets  
 FS 027 Blasting - Rock & Taconite  
 FS 028 Small Fleet Vehicle Travel on Unpaved Road  
 FS 029 Tailing Basin Wind Erosion - Dry  
 FS 030 Tailing Basin Wind Erosion - Damp

What to do	Why to do it
NESHAP GENERAL PROVISIONS - 40 CFR pt. 63, subp. A	hdr
Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit(s) subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.	40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000
The non-opacity emission standards apply at all times except during periods of startup, shutdown or malfunction.	40 CFR Section 63.6(f); Minn. R. 7011.7000
STARTUP, SHUTDOWNS AND MALFUNCTIONS	hdr
Malfunctions: Malfunctions shall be corrected as soon as practicable after their occurrence.	40 CFR Section 63.6(e)(1)(ii); Minn. R. 7011.7000
The Permittee shall prepare a written Startup, Shutdown, and Malfunction Plan (SSMP) for each of the emission units, including associated control and monitoring equipment, subject to Maximum Control Technology Standards by the applicable MACT standard compliance date. The SSMP shall be prepared in accordance with 40 CFR Section 63.6(e)(3) and include requirements specified therein. The SSMP must be located at the plant site and must be kept updated. When the SSMP is updated, the Permittee must keep all previous versions of the SSMP for a period of 5 years. The Permittee must submit the SSMP when required.	40 CFR Section 63.6(e)(3)(i); 40 CFR Section 63.6(e)(3)(v); Minn. R. 7011.7000
When actions taken by the Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the SSMP, the Permittee must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a checklist, or other effective form of record keeping that confirms conformance with the SSMP for that event. In addition, the Permittee must keep records of these events as specified in 40 CFR Section 63.10(b). Furthermore, the Permittee shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the SSMP in the Semi-Annual startup, shutdown, and malfunction report required in 40 CFR Section 63.10(d)(5).	40 CFR Section 63.6(e)(3)(iii); Minn. R. 7011.7000
Recordkeeping: The Permittee shall maintain files of all information required by 40 CFR part 63 in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Only the most recent two years of information must be kept on site.	40 CFR Section 63.10(b)(1); Minn. R. 7019.0100, subp. 2
The Permittee shall maintain, at a minimum, the following information in the files: 1) the occurrence and duration of each startup or shutdown when the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards; 2) the occurrence and duration of each malfunction of the emission unit or air pollution control or monitoring equipment; 3) all maintenance performed on the pollution control and monitoring equipment; 4) actions taken during periods of startup or shutdown when the source exceeded applicable emission limits in a relevant standard and when such actions are different from the procedures specified in the affected source's SSMP; or actions taken during period of malfunction when the actions taken are different from the procedures specified in the SSMP;	40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

(continued) 5) all information necessary to demonstrate conformance with the affected source's SSMP when all actions taken during SSM are consistent with procedures specified in the SSMP; 6) each period during which a continuous monitoring system (CMS) is malfunctioning or inoperative; 7) all required measurements needed to demonstrate compliance with a relevant standard; 8) all results of performance test, CMS performance evaluations, and opacity and visible emission observations; 9) all measurements as may be necessary to determine the conditions of performance tests and performance evaluations; 10) all CMS calibration checks; 11) all adjustments and maintenance performed on CMS; 12) any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements under this part; 13) all documents supporting initial notifications and notifications of compliance status.	40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2 (continued)
Prior to construction or reconstruction of an "affected source" under the promulgated MACT standards, the Permittee must apply for and obtain an air emission permit.	40 CFR Section 63.5(b)(3); Minn. R. 7011.7000
<b>PERFORMANCE TESTING</b>	hdr
Conduct of performance tests. Performance tests shall be conducted under such conditions as the Commissioner specifies based on representative performance of the affected source.	40 CFR Section 63.7(e); Minn. R. 7017.2015, subp. 3
Performance test methods and other procedures: The Permittee shall conduct each performance test according to the requirements in 40 CFR Section 63.7(e)(1) and the applicable requirements in 40 CFR Section 63.9621(b) and (c) for purposes of Taconite NESHA.	40 CFR Section 63.9621(a); Minn. R. 7011.8030
<b>MONITORING</b>	hdr
Operation and maintenance of continuous monitoring systems. The Permittee shall maintain and operate each CMS in a manner consistent with good air pollution control practices. The owner or operator must: - Maintain and operate each CMS as specified in section 63.6(e)(1). - Keep the necessary parts for routine repairs readily available. - Develop a written SSMP for each CMS as specified in section 63.6(e)(3).	40 CFR Section 63.8(c)(1); Minn. R. 7017.1010, subp. 2
All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s). The read out, or other indication of operation, from any CMS required for compliance with the emission standard must be readily accessible on site for operational control or inspection by the operator of the equipment.	40 CFR Section 63.8(c)(2); Minn.R. 7017.1010, subp. 2
All CMS shall be installed, operational, and the data verified prior to or in conjunction with conducting performance tests under section 63.7.  Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.	40 CFR Section 63.8(c)(3) and (4); 7017.1010, subp. 2
The Permittee shall develop and submit to the Commissioner for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph 40 CFR 63.8(e)(3)(i). The quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations: (i) Initial and any subsequent calibration of the CMS; (ii) Determination and adjustment of the calibration drift of the CMS; (iii) Preventive maintenance of the CMS, including spare parts inventory; (iv) Data recording, calculations, and reporting; (v) Accuracy audit procedures, including sampling and analysis methods; and (vi) Program of corrective action for a malfunctioning CMS.  The Permittee shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part.	40 CFR Section 63.8(d)(2) and (3); 7017.1010, subp. 2
Notification of performance evaluation. The Permittee shall notify the Commissioner in writing of the date of the performance evaluation simultaneously with the notification of the performance test date required under 40 CFR Section 63.7(b) or at least 60 days prior to the date the performance evaluation is scheduled to begin if no performance test is required.	40 CFR Section 63.8(e)(2); Minn.R. 7017.1010, subp. 2

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

The Permittee shall develop and submit a site-specific performance evaluation test plan to the Commissioner for approval upon request in accordance with 40 CFR Section 63.8(e)(3)(i).	40 CFR Section 63.8(e)(3)(i); Minn.R. 7017.1010, subp. 2
The Permittee shall conduct a performance evaluation of a required CMS during any performance test required under 40 CFR Section 63.7 in accordance with the applicable performance specification as specified in the relevant standard. If a performance test is not required, or the requirement for a performance test has been waived under section 40 CFR Section 63.7(h), the Permittee shall conduct the performance evaluation not later than 180 days after the appropriate compliance date.	40 CFR Section 63.8(e)(4); Minn.R. 7017.1010, subp. 2
The Permittee shall submit to the Commissioner a copy of a written report of the results of the performance evaluation simultaneously with the results of the performance test required under 40 CFR Section 63.7 or within 60 days of completion of the performance evaluation if no test is required.	40 CFR Section 63.8(e)(5); 40 CFR 63.10(e)(2); Minn.R. 7017.1010, subp. 2; Minn. R. 7019.0100, subp. 2
Reduction of monitoring data. The Permittee must reduce the monitoring data as specified in 40 CFR Section 63.8(g).	40 CFR Section 63.8(g); Minn.R. 7017.1010, subp. 2
NOTIFICATIONS	hdr
The Permittee shall submit notifications required under 40 CFR part 63 to the the Commissioner. In addition, the Permittee shall send a copy of each notification to the appropriate Region V contact.	40 CFR Section 63.9(a); Minn.R. 7019.0100, subp. 2
Notification of the Actual Date of Initial Startup: due 15 days after initial startup. Submit the name and number of each unit and the actual date of initial startup each unit.	40 CFR Section 63.9(b)(4)(v); Minn. R. 7019.0100, subp. 2
Performance Test Notifications and Submittals  Performance Test Notification (written): due 60 days before each Performance Test Performance Test Plan: due 60 days before each Performance Test Performance Test Pre-Test Meeting: due 7 day before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy or CD: due 105 days after each Performance Test.  The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	40 CFR Section 63.7(b)(1); 40 CFR Section 63.7(c)(2)(iv); 40 CFR Section 63.7(g)(1); 40 CFR Section 63.9(e); Minn. R. 7019.0100, subp. 2; Minn. R. 7017.2015, subp. 3; Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2018 and Minn. R. 7017.2035, subp. 1-2
The Permittee shall submit a written notification of the date the CMS performance evaluation under 40 CFR Section 63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under 40 CFR Section 63.7(b). If no performance test is required, the Permittee shall submit a written notification of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin.	40 CFR Section 63.9(g)(1); Minn.R. 7019.0100, subp. 2
The Permittee shall submit a notification of compliance status to the Commissioner following completion of the relevant compliance demonstration activity specified in the relevant standard.	40 CFR Section 63.9(h)(3); Minn.R. 7019.0100, subp. 2
The Permittee shall submit actual HAP emissions data and other information to verify that information submitted as part of the permit application is correct as soon as available but no later than with the initial notification of compliance.	40 CFR Section 63.9(h)(5); Minn.R. 7019.0100, subp. 2
Change in information already provided. Any change in the information already provided under this 40 CFR section 63.9 shall be provided to the Commissioner in writing within 15 calendar days after the change.	40 CFR Section 63.9(j); Minn.R. 7019.0100, subp. 2
Excess Emissions and Continuous Monitoring System Report; The Permittee shall submit an excess emissions and CMS performance report and/or a summary report to the Commissioner by the 30th day following the end of each calendar half . The report(s) shall include all the information required and in accordance with 40 CFR Section 63.10(e)(3).	40 CFR Section 63.10(e)(3)(i) and (v); Minn. R. 7019.0100, subp. 2
Immediate startup, shutdown, and malfunction reports; Any time an action taken by the Permittee during a startup or shutdown or malfunction (that caused the source to exceed any applicable emission limitation in the relevant emission standards), that is not consistent with the procedures specified in the affected source's SSMP, the Permittee shall report the actions taken for that event within 2 working days after commencing the actions followed by a letter within 7 working days after the end of the event. The reports must be in accordance with 40 CFR Section 63.10(d)(5)(ii).	40 CFR Section 63.10(d)(5)(ii); 40 CFR Section 63.6(e)(3)(iv); Minn. R. 7019.0100, subp. 2
RECORDKEEPING	hdr

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

<p>The Permittee shall maintain, at a minimum, the following information in the files:</p> <ol style="list-style-type: none"> <li>1) the occurrence and duration of each startup, shutdown, or malfunction of operation;</li> <li>2) the occurrence and duration of each malfunction of the air pollution control equipment;</li> <li>3) all maintenance performed on the pollution control equipment;</li> <li>4) actions taken during periods of startup, shutdown, and malfunction when such actions are different from the procedures specified in the affected source's (SSMP). In this case, the Permittee shall report this action within 2 days of occurrence and follow by a written notification within 7 days of occurrence.</li> <li>5) all information necessary to demonstrate conformance with the affected source's SSMP and actions taken in accordance with SSMP;</li> </ol>	40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2
<p>(continued)</p> <ol style="list-style-type: none"> <li>6) each period during which a CMS is malfunctioning or inoperative;</li> <li>7) all required measurements needed to demonstrate compliance with a relevant standard;</li> <li>8) all results of performance test, CMS performance evaluations, and opacity and visible emission observations;</li> <li>9) all measurements as may be necessary to determine the conditions of performance tests and performance evaluations;</li> <li>10) all CMS calibration checks;</li> <li>11) all adjustments and maintenance performed on CMS;</li> <li>12) any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements under this part;</li> <li>13) all documents supporting initial notifications and notifications of compliance status.</li> </ol>	40 CFR Section 63.10(b)(2); Minn. R. 7019.0100, subp. 2 (continued)
<p>The Permittee shall maintain records for each CMS:</p> <ol style="list-style-type: none"> <li>1) All required CMS measurements;</li> <li>2) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;</li> <li>3) The date and time identifying each period during which the CMS was out of control;</li> <li>4) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, that occurs during startups, shutdowns, and malfunctions of the affected source;</li> <li>5) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;</li> </ol>	40 CFR Section 63.10(c); Minn. R. 7019.0100, subp. 2
<p>(continued)</p> <ol style="list-style-type: none"> <li>6) The nature and cause of any malfunction;</li> <li>7) The corrective action taken or preventive measures adopted;</li> <li>8) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;</li> <li>9) The total process operating time during the reporting period; and</li> <li>10) All procedures that are part of a quality control program developed and implemented for CMS under 40 CFR section 63.8(d).</li> </ol>	40 CFR Section 63.10(c); Minn. R. 7019.0100, subp. 2 (continued)

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 009 Point Sources Subject to Taconite MACT**

**Associated Items:**

- CE 001 Venturi Scrubber
- CE 002 Venturi Scrubber
- CE 003 Venturi Scrubber
- CE 004 Venturi Scrubber
- CE 005 Wet Scrubber-High Efficiency
- CE 006 Wet Scrubber-High Efficiency
- CE 007 Wet Scrubber-High Efficiency
- CE 008 Wet Scrubber-High Efficiency
- CE 009 Wet Scrubber-High Efficiency
- CE 010 Wet Scrubber-High Efficiency
- CE 011 Wet Scrubber-High Efficiency
- CE 012 Wet Scrubber-High Efficiency
- CE 013 Wet Scrubber-High Efficiency
- CE 018 Wet Scrubber-High Efficiency
- CE 019 Wet Scrubber-High Efficiency
- CE 020 Wet Scrubber-High Efficiency
- CE 021 Wet Scrubber-High Efficiency
- CE 022 Venturi Scrubber
- CE 023 Venturi Scrubber
- CE 024 Venturi Scrubber
- CE 025 Venturi Scrubber
- CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 027 Venturi Scrubber
- CE 028 Venturi Scrubber
- CE 029 Venturi Scrubber
- CE 030 Venturi Scrubber
- CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 032 Venturi Scrubber
- CE 033 Venturi Scrubber
- CE 034 Venturi Scrubber
- CE 035 Venturi Scrubber
- CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
- CE 037 Wet Scrubber-High Efficiency
- CE 038 Wet Scrubber-High Efficiency
- CE 039 Wet Scrubber-High Efficiency
- CE 040 Wet Scrubber-High Efficiency
- CE 041 Wet Scrubber-High Efficiency
- EU 001 Phase I Apron Feeder
- EU 002 Phase II Apron Feeder

# TABLE A: LIMITS AND OTHER REQUIREMENTS

A-26

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Associated Items:**

- EU 003 Phase I Primary Ore Conveyor - Tail
- EU 004 Phase II Primary Ore Conveyor - Tail
- EU 005 Line No 1 Mill Feed Conveyor
- EU 006 Line No 2 Mill Feed Conveyor
- EU 007 Line No 3 Mill Feed Conveyor
- EU 008 Line No 4 Mill Feed Conveyor
- EU 009 Line No 5 Mill Feed Conveyor
- EU 010 Line No 6 Mill Feed Conveyor
- EU 011 Line No 7 Mill Feed Conveyor
- EU 012 Line No 8 Mill Feed Conveyor
- EU 013 Line No 9 Mill Feed Conveyor
- EU 018 Phase I Hearth Layer Bin/Layer Feed
- EU 019 Phase II Hearth Layer Bin/Layer Feed
- EU 020 Pellet Indurating Furnace Line No 1
- EU 021 Pellet Indurating Furnace Line No 2
- EU 022 Pellet Indurating Furnace Line No 3
- EU 023 Pellet Machine Discharge Line No 1
- EU 024 Pellet Machine Discharge Line No 2
- EU 025 Pellet Machine Discharge Line No 3
- EU 026 Pellet Hearth Layer Screening
- EU 027 Pellet Transfer House

What to do	Why to do it
OPERATING REQUIREMENTS	hdr
The Permittee shall meet the notification and schedule requirements in 40 CFR Section 63.9640.	40 CFR Section 63.9583; Minn. R. 7011.8030
The Permittee shall submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin.	40 CFR Section 63.9640(a); 40 CFR Section 63.7(b)(1); Minn. R. 7011.8030
The Permittee shall submit the initial notification of compliance status (including the performance test results) for each emission limitation and operating limit by the dates specified below: (1) For each initial compliance demonstration that does not include a performance test, before the close of business on the 30th calendar day following completion of the initial compliance demonstration. (2) For each initial compliance demonstration that does include a performance test, before the close of business on the 60th calendar day following the completion of the performance test.	40 CFR Section 63.9640(e); 40 CFR 63.9623(c); 40 CFR Section 63.9(h)(2)(ii); Minn. R. 7011.8030
The Permittee may change the operating limits for any air pollution control device if the Permittee:  1) submits a written notification to the Commissioner requesting to conduct a new performance test to revise the operating limit.  2) conduct a performance test to demonstrate compliance with the applicable emission limitation.  3) establishes revised operating limits according to the applicable procedures in 40 CFR Section 63.9622(a).	40 CFR Section 63.9622(f); Minn. R. 7011.8030

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3, or a representative unit within the same test group as specified by the applicable requirement. The limit is final upon issuance of a permit amendment incorporating the change.	40 CFR Section 63.9622(f); Minn. R. 7011.8030; Minn. R. 7017.2025, subp. 3
MONITORING	hdr
Monitoring Data. The Permittee shall monitor continuously (or collect data at all required intervals) at all times an affected source is operating except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments). The Permittee shall not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels, or to fulfill a minimum data availability requirement. The Permittee shall use all the data collected during all other periods in assessing compliance.	40 CFR Section 63.9633 ; Minn. R. 7011.8030
CORRECTIVE ACTIONS	hdr
In the event that an exceedance of an established operating limit for an air pollution control device except for a baghouse occurs, The Permittee shall initiate corrective action to determine the cause of the operating limit exceedance and complete the corrective action within 10 calendar days.	40 CFR Section 63.9600(b)(3); Minn. R. 7011.8030
If the daily average operating parameter value for an emission unit or group of similar emission units does not meet the corresponding established operating limit, the Permittee must then follow the following procedures:  (1) The Permittee must initiate and complete initial corrective action within 10 calendar days and demonstrate that the initial corrective action was successful. During any period of corrective action, the Permittee must continue to monitor and record all required operating parameters for equipment that remains in operation. After 10 calendar days, measure and record the daily average operating parameter value for the emission unit or group of similar emission units on which corrective action was taken.	40 CFR Section 63.9634(j); Minn. R. 7011.8030
(continued)  (2) If the initial corrective action required in (1) was not successful, then the Permittee must complete additional corrective action within 10 calendar days and demonstrate that the subsequent corrective action was successful. After the second set of 10 calendar days allowed to implement corrective action, the Permittee must again measure and record the daily average operating parameter value for the emission unit or group of similar emission units.  (3) If the second attempt at corrective action required in paragraph (2) was not successful, then the Permittee must repeat the procedures until the corrective action is successful. If the third attempt at corrective action is unsuccessful, the Permittee must conduct another performance test in accordance with the procedures in 40 CFR section 63.9622(f) and report to the Commissioner as a deviation the third unsuccessful attempt at corrective action.	40 CFR Section 63.9634(j); Minn. R. 7011.8030 (continued)
(continued)  (4) After the third unsuccessful attempt at corrective action, the Permittee must submit the written report required in (3) within 5 calendar days after the third unsuccessful attempt at corrective action. This report must notify the Commissioner that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.	40 CFR Section 63.9634(j); Minn. R. 7011.8030 (continued)
REPORTING	hdr
Deviations. The Permittee must report each instance in which an emission limitation was not met. This includes periods of startup, shutdown, and malfunction. The Permittee must report each instance in which a work practice standards in 40 CFR section 63.9591 was not met. The Permittee must report each instance in which an applicable operation and maintenance requirement in 40 CFR section 63.9600 was not met. These deviations must be reported in accordance with the requirements in 40 CFR section 63.9641.	40 CFR Section 63.9637(a) ; Minn. R. 7011.8030
The Permittee shall submit a notification of compliance status to the Commissioner following completion of the relevant compliance demonstration activity specified in the relevant standard.	40 CFR Section 63.9(h)(3); Minn. R. 7011.8030; Minn.R. 7019.0100, subp. 2

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-28**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Immediate startup, shutdown, and malfunction reports: Any time an action taken by the Permittee during a startup or shutdown or malfunction (that caused the source to exceed any applicable emission limitation in the relevant emission standards), that is not consistent with the procedures specified in the affected source's SSMP, the Permittee shall report the actions taken for that event within 2 working days after commencing the actions followed by a letter within 7 working days after the end of the event. The reports must be in accordance with 40 CFR Section 63.10(d)(5)(ii).	40 CFR Section 63.10(d)(5)(ii); 40 CFR Section 63.9641(c); Minn. R. 7011.8030; Minn. R. 7019.0100, subp. 2
Immediate corrective action report. The Permittee shall submit an immediate corrective action report if three unsuccessful attempts of applying corrective action as described in 40 CFR section 63.9634(j) were made on an emission unit or group of emission units. Also, within 5 calendar days after the third unsuccessful attempt at corrective action, the Permittee shall submit to the Commissioner a written report in accordance with 40 CFR section 63.9634(j)(3) and (4).	40 CFR Section 63.9641(e); Minn. R. 7011.8030
During periods of startup, shutdown, and malfunction, the Permittee must operate in accordance with your SSMP and the requirements in paragraphs 40 CFR Section 63.9637(b)(1) and (2).	40 CFR Section 63.9637(b); Minn. R. 7011.8030
Compliance Report Content: Each compliance report must include the information in paragraphs (1) through (3) and, as applicable, in paragraphs (4) through (8). (1) Company name and address. (2) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. (3) Date of report and beginning and ending dates of the reporting period. (4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your SSMP, the compliance report must include the information in Section 63.10(d)(5)(i). (5) If there were no deviations from the continuous compliance requirements in Sections 63.9634 through 63.9636 that apply to you, then provide a statement that there were no deviations from the emission limitations, work practice standards, or O & M requirements during the reporting period.	40 CFR Section 63.9641(b); Minn. R. 7011.8030
Compliance Report Content (continued): (6) If there were no periods during which a CMS (including a CPMS) was out-of-control as specified in Section 63.8(c)(7), then provide a statement that there were no periods during which a CMS was out-of-control during the reporting period. (7) For each deviation from an emission limitation in Table 1 to this subpart that occurs at an affected source where you are not using a CMS (including a CPMS) to comply with an emission limitation, the compliance report must contain the information in paragraphs (1) through (4) of this section and the information in paragraphs (7)(i) and (ii). This includes periods of startup, shutdown, and malfunction. (i) The total operating time of each affected source during the reporting period. (ii) Information on the number, duration, and cause of deviations (including unknown cause) as applicable, and the corrective action taken.	40 CFR Section 63.9637(b); Minn. R. 7011.8030 (continued)
Compliance Report Content (continued): (8) For each deviation from an emission limitation occurring at an affected source a CMS (including a CPMS) is used to comply with the emission limitation, the Permittee must include the information in paragraphs (1) through (4) and the information in paragraphs (8)(i) through (xi). This includes periods of startup, shutdown, and malfunction. (i) The date and time that each malfunction started and stopped. (ii) The date and time that each CMS was inoperative, except for zero (low-level) and high-level checks. (iii) The date, time, and duration that each CMS was out-of-control, including the information in Section 63.8(c)(8). (iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.	40 CFR Section 63.9637(b); Minn. R. 7011.8030 (continued)
Compliance Report Content (continued): (v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period. (vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. (vii) A summary of the total duration of CMS downtime during the reporting period and the total duration of CMS downtime as a percent of the total source operating time during the reporting period. (viii) A brief description of the process units. (ix) A brief description of the CMS. (x) The date of the latest CMS certification or audit.	40 CFR Section 63.9637(b); Minn. R. 7011.8030 (continued)



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-29**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

Compliance Report Content (continued): (xi) A description of any changes in CMS, processes, or controls since the last reporting period.	40 CFR Section 63.9637(b); Minn. R. 7011.8030 (continued)
RECORDKEEPING	hdr
<p>The Permittee shall keep:</p> <ul style="list-style-type: none"><li>- A copy of each notification and report that you submitted to comply with this 40 CFR part 63, subpart RRRRR.</li><li>- The records in 40 CFR section 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.</li><li>- Records of performance tests and performance evaluations as required in section 63.10(b)(2)(viii).</li></ul> <p>The Permittee shall also keep the records required in 40 CFR sections 63.9634 through 63.9636 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that apply. Each record shall be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Each record shall be kept on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.</p>	40 CFR Section 63.9642(a) and (c); 40 CFR Section 63.9643(b) and (c); Minn. R. 7011.8030

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-30**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT**

**Associated Items:**

- CE 001 Venturi Scrubber
- CE 002 Venturi Scrubber
- CE 003 Venturi Scrubber
- CE 004 Venturi Scrubber
- CE 005 Wet Scrubber-High Efficiency
- CE 006 Wet Scrubber-High Efficiency
- CE 007 Wet Scrubber-High Efficiency
- CE 008 Wet Scrubber-High Efficiency
- CE 009 Wet Scrubber-High Efficiency
- CE 010 Wet Scrubber-High Efficiency
- CE 011 Wet Scrubber-High Efficiency
- CE 012 Wet Scrubber-High Efficiency
- CE 013 Wet Scrubber-High Efficiency
- EU 001 Phase I Apron Feeder
- EU 002 Phase II Apron Feeder
- EU 003 Phase I Primary Ore Conveyor - Tail
- EU 004 Phase II Primary Ore Conveyor - Tail
- EU 005 Line No 1 Mill Feed Conveyor
- EU 006 Line No 2 Mill Feed Conveyor
- EU 007 Line No 3 Mill Feed Conveyor
- EU 008 Line No 4 Mill Feed Conveyor
- EU 009 Line No 5 Mill Feed Conveyor
- EU 010 Line No 6 Mill Feed Conveyor
- EU 011 Line No 7 Mill Feed Conveyor
- EU 012 Line No 8 Mill Feed Conveyor
- EU 013 Line No 9 Mill Feed Conveyor
- SV 001
- SV 002
- SV 003
- SV 004
- SV 005
- SV 006
- SV 007
- SV 008
- SV 009
- SV 010
- SV 011
- SV 012

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-31**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

What to do	Why to do it
EMISSIONS AVERAGING	hdr
<p>For emission units not selected for initial performance testing and defined within a group of similar emission units in accordance with 40 CFR section 63.9620(e), the Permittee shall calculate the daily average value of each operating parameter for the similar air pollution control device applied to each similar emission unit within a defined group using the following equation.</p> <p><math>P_k = (\text{sum of all } P_i)/n</math></p> <p><math>P_k</math> = Daily average operating parameter value for all emission units within group k; <math>P_i</math> = Daily average parametric monitoring parameter value corresponding to emission unit i within the group; and <math>n</math> = Total number of emission units within the group, including emission units that have been selected for performance tests and those that have not been selected for performance tests.</p>	40 CFR Section 63.9634(b); Minn. R. 7011.8030
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-32**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 011 Finished Pellet Handling Sources Subject to Taconite MACT**

**Associated Items:**

- CE 018 Wet Scrubber-High Efficiency
- CE 019 Wet Scrubber-High Efficiency
- CE 020 Wet Scrubber-High Efficiency
- CE 021 Wet Scrubber-High Efficiency
- CE 037 Wet Scrubber-High Efficiency
- CE 038 Wet Scrubber-High Efficiency
- CE 039 Wet Scrubber-High Efficiency
- CE 040 Wet Scrubber-High Efficiency
- CE 041 Wet Scrubber-High Efficiency
- EU 018 Phase I Hearth Layer Bin/Layer Feed
- EU 019 Phase II Hearth Layer Bin/Layer Feed
- EU 023 Pellet Machine Discharge Line No 1
- EU 024 Pellet Machine Discharge Line No 2
- EU 025 Pellet Machine Discharge Line No 3
- EU 026 Pellet Hearth Layer Screening
- EU 027 Pellet Transfer House
- SV 017
- SV 018
- SV 019
- SV 020
- SV 033
- SV 034
- SV 035
- SV 036
- SV 037

What to do	Why to do it
EMISSIONS AVERAGING	hdr
<p>For emission units not selected for initial performance testing and defined within a group of similar emission units in accordance with 40 CFR section 63.9620(e), the Permittee shall calculate the daily average value of each operating parameter for the similar air pollution control device applied to each similar emission unit within a defined group using the following equation.</p> <p><math>P_k = (\text{sum of all } P_i) / n</math></p> <p><math>P_k</math> = Daily average operating parameter value for all emission units within group k;  <math>P_i</math> = Daily average parametric monitoring parameter value corresponding to emission unit i within the group; and  <math>n</math> = Total number of emission units within the group, including emission units that have been selected for performance tests and those that have not been selected for performance tests.</p>	40 CFR Section 63.9634(b); Minn. R. 7011.8030
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 012 Indurating Sources Subject to Taconite MACT**

**Associated Items:**

CE 022 Venturi Scrubber

CE 023 Venturi Scrubber

CE 024 Venturi Scrubber

CE 025 Venturi Scrubber

CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 027 Venturi Scrubber

CE 028 Venturi Scrubber

CE 029 Venturi Scrubber

CE 030 Venturi Scrubber

CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 032 Venturi Scrubber

CE 033 Venturi Scrubber

CE 034 Venturi Scrubber

CE 035 Venturi Scrubber

CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

EU 020 Pellet Indurating Furnace Line No 1

EU 021 Pellet Indurating Furnace Line No 2

EU 022 Pellet Indurating Furnace Line No 3

SV 021

SV 022

SV 023

SV 024

SV 025

SV 026

SV 027

SV 028

SV 029

SV 030

SV 031

SV 032

What to do	Why to do it
<p>Good combustion practices (GCP) for indurating furnaces; The Permittee shall identify and implement a set of site-specific GCP for the indurating furnace. These GCP shall correspond to standard operating procedures for maintaining the proper and efficient combustion within each indurating furnace. GPC include, but are not limited to the following elements:</p> <ol style="list-style-type: none"> <li>1) Proper operating conditions for each indurating furnace (e.g., minimum combustion temperature, maximum carbon monoxide concentration in the furnace exhaust gases, burner alignment, or proper fuel-air distribution/mixing).</li> <li>2) Routine inspection and preventative maintenance and corresponding schedules.</li> <li>3) Performance analyses.</li> <li>4) Keeping applicable operator logs.</li> <li>5) Keeping applicable records to document compliance with each element.</li> </ol>	<p>40 CFR Section 63.9600(b)(4); 40 CFR Section 63.9636(a)(4); Minn. R. 7011.8030</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-34**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

The Permittee shall: - Perform preventative maintenance for each control device in accordance with 40 CFR Section 63.9600(b)(1) and record all information needed to document conformance with these requirements. - Implement and maintain site-specific GPC for each indurating furnace in accordance with 40 CFR Section 63.9600(b)(4) and record all information needed to document conformance with these requirements.	40 CFR Sections 63.9636(a)(1) and (4); Minn. R. 7011.8030
PERFORMANCE TESTING REQUIREMENTS See GP003, GP008 and the CE level.	hdr

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 013 Fugitive Sources Subject to Taconite MACT**

**Associated Items:**

- FS 001 Truck Dump/Crusher Building
- FS 002 Primary Ore Conveyor to Shuttle Belt
- FS 003 Shuttle Belt to Crude Ore Stockpile
- FS 004 Wind Erosion - Crude Ore Stockpile
- FS 005 Non-Metallic Rock Transfer (Cobbed Rock)
- FS 006 Wind Erosion - Non-Metallic Rock Stockpile (Cobbed Rock)
- FS 007 Filter Cake Stockpiles Load
- FS 008 Filter Cake Reclaim Load
- FS 009 Filter Cake Wind Erosion
- FS 010 Pellet Bin Loading
- FS 011 Pellet Stockpiles Load
- FS 012 Pellet Reclaim Load
- FS 013 Pellet Wind Erosion
- FS 014 Cleaning - Steam Cleaning Vehicles/Parts/Buildings
- FS 016 Loading Overburden
- FS 017 Unloading Overburden
- FS 018 Wind Erosion Overburden
- FS 019 Drilling Rock
- FS 020 Loading Rock
- FS 021 Unloading Rock
- FS 022 Wind Erosion Rock
- FS 023 Drilling Taconite Ore
- FS 024 Loading Taconite Ore
- FS 025 Hauling on Unpaved Haul Road, Overburden, Rock, Taconite, Misc.
- FS 026 Non-Productive Material Transfers - Tailing, Rock, Crude Ore Emergency, Filter Cake, Pellets
- FS 027 Blasting - Rock & Taconite
- FS 028 Small Fleet Vehicle Travel on Unpaved Road
- FS 029 Tailing Basin Wind Erosion - Dry
- FS 030 Tailing Basin Wind Erosion - Damp

What to do	Why to do it
FUGITIVE DUST EMISSIONS CONTROL PLAN	hdr

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

<p>The Permittee shall prepare and at all times operate according to, a fugitive dust emissions control plan that describes in detail the measures that will be put in place to control fugitive dust emissions from:</p> <p>1) Stockpiles (includes, but is not limited to, stockpiles of uncrushed ore, crushed ore, or finished pellets);</p> <p>2) Material transfer points;</p> <p>3) Plant roadways;</p> <p>4) Tailings basin;</p> <p>5) Pellet loading areas; and</p> <p>6) Yard areas.</p> <p>The Permittee shall maintain a current copy of the fugitive dust emissions control plan onsite, and it must be available for inspection upon request. The plan must be kept for the life of the affected source or until the affected source is no longer subject to the requirements of 40 CFR Part 63, subp RRRRR.</p>	<p>40 CFR Section 63.9591(a); 40 CFR Section 63.9591(d);40 CFR Section 63.9635</p>
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**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-37**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: GP 014 Wet Scrubbers Subject to Taconite MACT**

**Associated Items:**

- CE 001 Venturi Scrubber
- CE 002 Venturi Scrubber
- CE 003 Venturi Scrubber
- CE 004 Venturi Scrubber
- CE 005 Wet Scrubber-High Efficiency
- CE 006 Wet Scrubber-High Efficiency
- CE 007 Wet Scrubber-High Efficiency
- CE 008 Wet Scrubber-High Efficiency
- CE 009 Wet Scrubber-High Efficiency
- CE 010 Wet Scrubber-High Efficiency
- CE 011 Wet Scrubber-High Efficiency
- CE 012 Wet Scrubber-High Efficiency
- CE 013 Wet Scrubber-High Efficiency
- CE 018 Wet Scrubber-High Efficiency
- CE 019 Wet Scrubber-High Efficiency
- CE 020 Wet Scrubber-High Efficiency
- CE 021 Wet Scrubber-High Efficiency
- CE 022 Venturi Scrubber
- CE 023 Venturi Scrubber
- CE 024 Venturi Scrubber
- CE 025 Venturi Scrubber
- CE 027 Venturi Scrubber
- CE 028 Venturi Scrubber
- CE 029 Venturi Scrubber
- CE 030 Venturi Scrubber
- CE 032 Venturi Scrubber
- CE 033 Venturi Scrubber
- CE 034 Venturi Scrubber
- CE 035 Venturi Scrubber
- CE 037 Wet Scrubber-High Efficiency
- CE 038 Wet Scrubber-High Efficiency
- CE 039 Wet Scrubber-High Efficiency
- CE 040 Wet Scrubber-High Efficiency
- CE 041 Wet Scrubber-High Efficiency
- EU 001 Phase I Apron Feeder
- EU 002 Phase II Apron Feeder
- EU 003 Phase I Primary Ore Conveyor - Tail
- EU 004 Phase II Primary Ore Conveyor - Tail
- EU 005 Line No 1 Mill Feed Conveyor

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-38**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Associated Items:**

- EU 006 Line No 2 Mill Feed Conveyor
- EU 007 Line No 3 Mill Feed Conveyor
- EU 008 Line No 4 Mill Feed Conveyor
- EU 009 Line No 5 Mill Feed Conveyor
- EU 010 Line No 6 Mill Feed Conveyor
- EU 011 Line No 7 Mill Feed Conveyor
- EU 012 Line No 8 Mill Feed Conveyor
- EU 013 Line No 9 Mill Feed Conveyor
- EU 018 Phase I Hearth Layer Bin/Layer Feed
- EU 019 Phase II Hearth Layer Bin/Layer Feed
- EU 020 Pellet Indurating Furnace Line No 1
- EU 021 Pellet Indurating Furnace Line No 2
- EU 022 Pellet Indurating Furnace Line No 3
- EU 023 Pellet Machine Discharge Line No 1
- EU 024 Pellet Machine Discharge Line No 2
- EU 025 Pellet Machine Discharge Line No 3
- EU 026 Pellet Hearth Layer Screening
- EU 027 Pellet Transfer House

What to do	Why to do it
Each individual emission unit and piece of control equipment listed under the Associated Items is subject to the requirements of this group (GP014). Members of GP014 are also subject to the provisions of GP004, GP008 and GP009. Individual emission units may be members of GP001, GP002, GP003, GP010, GP011, or GP012. Individual scrubbers may be subject to requirements at the CE level.	40 CFR Section 63, subp. RRRRR; Minn. R. 7011.8030
OPERATION AND MAINTENANCE PLAN	hdr
<p>Operation and Maintenance Plan:</p> <p>The Permittee shall prepare, and at all times operate according to a written O &amp; M plan. The Permittee shall maintain a current copy of the O &amp; M plan onsite, and it must be available for inspection upon request. The plan must be kept for the life of the affected source or until the affected source is no longer subject to 40 CFR part 63, subpart RRRRR.</p> <p>The plan shall address preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.</p>	40 CFR Section 63.9600(b); Minn. R. 7011.8030; 40 CFR Section 64.7(b):CAM and Minn. R. 7017.0200
<p>Operation and Maintenance Plan (continued):</p> <p>In the event that an exceedance of an established operating limit for an air pollution control device occurs, the Permittee shall initiate corrective action to determine the cause of the operating limit exceedance and complete the corrective action within 10 calendar days. The corrective action procedures taken must be consistent with the installation, operation, and maintenance procedures listed in the site-specific CPMS monitoring plan in accordance with 40 CFR Section 63.9632(b).</p>	40 CFR Section 63.9600(b); Minn. R. 7011.8030 (continued)
CORRECTIVE ACTIONS	hdr
If the daily average operating parameter value for an emission unit or group of similar emission units does not meet the corresponding established operating limit, you must then follow the procedures in paragraphs (1) through (4), below.	40 CFR 63.9634(j); Minn. R. 7011.8030

**TABLE A: LIMITS AND OTHER REQUIREMENTS**
**A-39**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

(continued) (1) You must initiate and complete initial corrective action within 10 calendar days and demonstrate that the initial corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After 10 calendar days, measure and record the daily average operating parameter value for the emission unit or group of similar emission units on which corrective action was taken. After the initial corrective action, if the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.	40 CFR 63.9634(j); Minn. R. 7011.8030 (continued)
(continued) (2) If the initial corrective action required in paragraph (1) was not successful, then you must complete additional corrective action within 10 calendar days and demonstrate that the subsequent corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After the second set of 10 calendar days allowed to implement corrective action, you must again measure and record the daily average operating parameter value for the emission unit or group of similar emission units. If the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.	40 CFR 63.9634(j); Minn. R. 7011.8030 (continued)
(continued) (3) If the second attempt at corrective action required in paragraph (2) was not successful, then you must repeat the procedures of paragraph (2) until the corrective action is successful. If the third attempt at corrective action is unsuccessful, you must conduct another performance test in accordance with the procedures in 40 CFR 63.9622(f) and report to the Administrator as a deviation the third unsuccessful attempt at corrective action. (4) After the third unsuccessful attempt at corrective action, you must submit to the Administrator the written report required in paragraph (3) within 5 calendar days after the third unsuccessful attempt at corrective action. This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.	40 CFR 63.9634(j); Minn. R. 7011.8030 (continued)
<b>PARAMETRIC LIMITS</b>	hdr
The Permittee shall establish site-specific operating limits. The Permittee shall: 1) measure and record the pressure drop and scrubber water flow rate every 15 minutes during each run of the particulate matter performance test. 2) Calculate and record the average pressure drop and scrubber water flow rate for each individual test run.	40 CFR Section 63.9622(a); Minn. R. 7011.8030; 40 CFR Section 64.9(b) and Minn. R. 7017.0200
The Permittee shall maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial performance test.  The Permittee may change the daily average pressure drop and daily average scrubber water flow rate if the permittee: 1) submits a written notification to the Commissioner requesting to conduct a new performance test to revise the operating limit. 2) conduct a performance test to demonstrate compliance with the applicable emission limitation. 3) establishes revised operating limits according to the applicable procedures in 40 CFR Section 63.9622(a).	40 CFR Section 63.9590(b)(1); 40 CFR Section 63.9622(f); Minn. R. 7011.8030; 40 CFR Sections 64.7(e) and 64.9(a); CAM and Minn. R. 7017.0200
The Permittee shall install, operate, and maintain a CPMS according to the requirements in 40 CFR 63.9632(b) through (e) and monitor the daily average pressure drop and daily average scrubber water flow rate according to the requirements in 40 CFR 63.9633.	40 CFR Section 63.9631(b); Minn. R. 7011.8030; 40 CFR Section 64.7(b); CAM and Minn. R. 7017.0200
The Permittee shall maintain a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with 40 CFR section 63.9622(a).	40 CFR Section 63.9623(b); Minn. R. 7011.8030; 40 CFR 64.9(b); CAM and Minn. R. 7017.0200

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-40**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

<p>The Permittee shall develop and make available for inspection, a site-specific monitoring plan that addresses the following:</p> <ol style="list-style-type: none"> <li>1) Installation of the CPMS sampling probe or other interface at a measurement location relative to each affected emission unit such that the measurement is representative of control of the exhaust emissions.</li> <li>2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system.</li> <li>3) Performance evaluation procedures and acceptance criteria.</li> <li>4) Ongoing operation and maintenance procedures in accordance with 40 CFR section 63.8(c)(1), (3), (4)(ii), (7), and (8).</li> <li>5) Ongoing data quality assurance procedures in accordance with 40 CFR section 63.8(d).</li> <li>6) Ongoing recordkeeping and reporting procedures in accordance with 40 CFR section 63.10(c), (e)(1), and (e)(2)(i).</li> <li>7) Corrective action procedures to be followed in the event an air pollution control device exceeds an operating limit.</li> </ol>	<p>40 CFR Section 63.9632(b); Minn. R. 7011.8030; 40 CFR Section 64.6: CAM and Minn. R. 7017.0200</p>
<p>The Permittee shall install and operate each CPMS such that the CPMS completes a minimum of one cycle of operation for each successive 15-minute period and determines and records valid data for at least 95 percent of every daily averaging period. Each CPMS must also determine and record the daily average of all recorded readings.</p> <p>The Permittee shall operate and maintain each CPMS and conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.</p>	<p>40 CFR Section 63.9632(c), (d) and (e); Minn. R. 7011.8030; 40 CFR 64.6: CAM and Minn. R. 7017.0200</p>
<p>The Permittee shall maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.</p> <p>The Permittee shall operate and maintain each wet scrubber CPMS according to 40 CFR section 63.9632(b) and record all the information needed to document conformance with these requirements.</p> <p>The Permittee shall collect and reduce monitoring data for pressure drop and scrubber water flow rate according to 40 CFR section 63.9632(c) and record all the information needed to document conformance with these requirements.</p> <p>If the daily average pressure drop or daily average scrubber water flow rate is below the operating limits established for a corresponding emission unit or group of similar emission units, the Permittee shall then follow the corrective action procedures in 40 CFR section 63.9634(j) of this section.</p>	<p>40 CFR Section 63.9634(e); Minn. R. 7011.8030; 40 CFR Section 64.7(c): CAM and Minn. R. 7017.0200</p>
<p>The Permittee shall perform preventative maintenance for each control device in accordance with 40 CFR section 63.9600(b)(1) and recording all information needed to document conformance with these requirements.</p> <p>The Permittee shall also initiate and complete corrective action (in accordance with 40 CFR section 63.9600(b)(3)) for a CPMS when an established operating limit for an air pollution control device is exceeded and record all the information needed to document conformance with these requirements.</p>	<p>40 CFR Section 63.9636(a)(1) and (3); Minn. R. 7011.8030; 40 CFR Section 64.7(b) and (d): CAM and Minn. R. 7017.0200</p>

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-41**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** GP 018 Multiclones Subject to Taconite MACT**Associated Items:** CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

What to do	Why to do it
OPERATION AND MAINTENANCE PLAN	hdr
<p>Operation and Maintenance Plan:</p> <p>The Permittee shall prepare, and at all times operate according to a written O &amp; M plan. The Permittee shall maintain a current copy of the O &amp; M plan onsite, and it must be available for inspection upon request. The plan must be kept for the life of the affected source or until the affected source is no longer subject to 40 CFR part 63, subpart RRRRR.</p> <p>The plan shall address preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.</p>	40 CFR Section 63.9600(b); Minn. R. 7011.8030; 40 CFR Section 64.7(b):CAM and Minn. R. 7017.0200
<p>Operation and Maintenance Plan (continued):</p> <p>In the event that an exceedance of an established operating limit for an air pollution control device occurs, the Permittee shall initiate corrective action to determine the cause of the operating limit exceedance and complete the corrective action within 10 calendar days. The corrective action procedures taken must be consistent with the installation, operation, and maintenance procedures listed in the site-specific CPMS monitoring plan in accordance with 40 CFR Section 63.9632(b).</p>	40 CFR Section 63.9600(b); Minn. R. 7011.8030 (continued)
SITE-SPECIFIC MONITORING PLAN	hdr
The site-specific monitoring plan must include the site-specific procedures for demonstrating initial and continuous compliance with the corresponding operating limit.	40 CFR 63.9622(e); 40 CFR 63.9634(i); Minn. R. 7011.8030
CORRECTIVE ACTIONS	hdr
<p>If the daily average operating parameter value for an emission unit or group of similar emission units does not meet the corresponding established operating limit, you must then follow the procedures in paragraphs (1) through (4), below.</p> <p>(continued)</p> <p>(1) You must initiate and complete initial corrective action within 10 calendar days and demonstrate that the initial corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After 10 calendar days, measure and record the daily average operating parameter value for the emission unit or group of similar emission units on which corrective action was taken. After the initial corrective action, if the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.</p>	40 CFR 63.9634(j); Minn. R. 7011.8030
<p>(continued)</p> <p>(2) If the initial corrective action required in paragraph (1) was not successful, then you must complete additional corrective action within 10 calendar days and demonstrate that the subsequent corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After the second set of 10 calendar days allowed to implement corrective action, you must again measure and record the daily average operating parameter value for the emission unit or group of similar emission units. If the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.</p>	40 CFR 63.9634(j); Minn. R. 7011.8030 (continued)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-42**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

<p>(continued)</p> <p>(3) If the second attempt at corrective action required in paragraph (2) was not successful, then you must repeat the procedures of paragraph (2) until the corrective action is successful. If the third attempt at corrective action is unsuccessful, you must conduct another performance test in accordance with the procedures in 40 CFR 63.9622(f) and report to the Administrator as a deviation the third unsuccessful attempt at corrective action.</p> <p>(4) After the third unsuccessful attempt at corrective action, you must submit to the Administrator the written report required in paragraph (3) within 5 calendar days after the third unsuccessful attempt at corrective action. This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.</p>	40 CFR 63.9634(j); Minn. R. 7011.8030 (continued)
PARAMETRIC LIMITS	hdr
<p>The Permittee shall maintain the daily average operating parameter specified in the site-specific monitoring plan in accordance with 63.9631(f) at or above the minimum levels established during the initial performance test.</p> <p>The Permittee may change the daily average operating parameter value if the permittee:</p> <ol style="list-style-type: none"> <li>1) submits a written notification to the Commissioner requesting to conduct a new performance test to revise the operating limit.</li> <li>2) conduct a performance test to demonstrate compliance with the applicable emission limitation.</li> <li>3) establishes revised operating limits according to the procedures in the site-specific monitoring plan in accordance with 40 CFR Section 63.9622(e).</li> </ol>	40 CFR 63.9590(b)(5); 40 CFR 63.9622(f); Minn. R. 7011.8030
The Permittee shall maintain a record of the site-specific operating limits as measured during the performance test in accordance with 40 CFR 63.9622(e)	40 CFR 63.9623(b)(5); Minn. R. 7011.8030
<p>The Permittee shall install and operate each CPMS such that the CPMS completes a minimum of one cycle of operation for each successive 15-minute period and determines and records valid data for at least 95 percent of every daily averaging period. Each CPMS must also determine and record the daily average of all recorded readings.</p> <p>The Permittee shall operate and maintain each CPMS and conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.</p>	40 CFR Section 63.9632(c), (d) and (e); Minn. R. 7011.8030
<p>The Permittee shall perform preventative maintenance for each control device in accordance with 40 CFR section 63.9600(b)(1) and recording all information needed to document conformance with these requirements.</p> <p>The Permittee shall also initiate and complete corrective action (in accordance with 40 CFR section 63.9600(b)(3)) for a CPMS when an established operating limit for an air pollution control device is exceeded and record all the information needed to document conformance with these requirements.</p>	40 CFR Section 63.9636(a)(1) and (3); Minn. R. 7011.8030

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-43**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** EU 036 Paint Booth**Associated Items:** SV 045

What to do	Why to do it
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)
Total Particulate Matter: greater than or equal to 85 percent control efficiency for equipment which is located not less than one-fourth mile from any residence or public roadway, and the operation of the entire emission facility does not cause a violation of the ambient air quality standards, shall be considered in compliance with the requirements of Minn. R. 7011.0715, subp. 1(A). This is an alternative demonstration of compliance to the Total Particulate Limit above.	Minn. R. 7011.0715, subp. 3
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
POLLUTION CONTROL EQUIPMENT LIMITS	hdr
Pressure Drop: greater than or equal to 0.5 inches of water column across the mat or panel filter for CE 046, per operation parameters submitted on 12/21/2005 via e-mail.	Minn. R. 7007.0800, subp. 4(D); 14; 16(J)
MONITORING, TESTING AND REPORTING	hdr
Gas Stream Pressure Drop: Monitor and record the gas stream pressure drop at least once each operating day. Once the the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from this range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)
Inspect monthly, or as required by the O&M plan and manufacturer specifications, the capture/containment and panel filter control system. Maintain a written record of each inspection and any action resulting from the inspection.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; and Minn. R. 7007.0800, subp. 16(J)

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-44**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 001 Venturi Scrubber**Associated Items:** EU 001 Phase I Apron Feeder

GP 001 Crushing

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 001 Phase I Apron Feeder: Venturi Scrubber

MR 002 Phase I Apron Feeder: Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 12 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 27 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 30 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP001.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-45**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 002 Venturi Scrubber**Associated Items:** EU 002 Phase II Apron Feeder

GP 001 Crushing

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 003 Phase II Apron Feeder: Venturi Scrubber

MR 004 Phase II Apron Feeder: Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 16 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 42 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 30 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 36 months following Permit Issuance to measure front-catch particulate matter for compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP001.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-46**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 003 Venturi Scrubber**Associated Items:** EU 003 Phase I Primary Ore Conveyor - Tail

GP 001 Crushing

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 005 Phase I POC: Venturi Scrubber

MR 006 Phase I POC: Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.6 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 18 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 30 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP001.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-47**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 004 Venturi Scrubber**Associated Items:** EU 004 Phase II Primary Ore Conveyor - Tail

GP 001 Crushing

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 007 Phase II POC: Venturi Scrubber

MR 008 Phase II POC: Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.2 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 26 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 30 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP001.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 005 Wet Scrubber-High Efficiency****Associated Items:** EU 005 Line No 1 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 009 Mill Line 1: HE Wet Scrubber

MR 010 Mill Line 1: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 18 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 43 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 36 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-49**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 006 Wet Scrubber-High Efficiency****Associated Items:** EU 006 Line No 2 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 011 Mill Line 2: HE Wet Scrubber

MR 012 Mill Line 2: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 18 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 48 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-50**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 007 Wet Scrubber-High Efficiency****Associated Items:** EU 007 Line No 3 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 013 Mill Line 3: HE Wet Scrubber

MR 014 Mill Line 3: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 18 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 42 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-51**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 008 Wet Scrubber-High Efficiency****Associated Items:** EU 008 Line No 4 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 015 Mill Line 4: HE Wet Scrubber

MR 016 Mill Line 4: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 20 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-52**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 009 Wet Scrubber-High Efficiency****Associated Items:** EU 009 Line No 5 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 017 Mill Line 5: HE Wet Scrubber

MR 018 Mill Line 5: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 19 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 44 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-53**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 010 Wet Scrubber-High Efficiency****Associated Items:** EU 010 Line No 6 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 019 Mill Line 6: HE Wet Scrubber

MR 020 Mill Line 6: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 20 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 34 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 36 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-54**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 011 Wet Scrubber-High Efficiency****Associated Items:** EU 011 Line No 7 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 021 Mill Line 7: HE Wet Scrubber

MR 022 Mill Line 7: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 19 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 37 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

A-55

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 012 Wet Scrubber-High Efficiency**Associated Items:** EU 012 Line No 8 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 023 Mill Line 8: HE Wet Scrubber

MR 024 Mill Line 8: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 19 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 47 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 013 Wet Scrubber-High Efficiency****Associated Items:** EU 013 Line No 9 Mill Feed Conveyor

GP 002 Concentrating

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 010 Ore Crushing and Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 025 Mill Line 9: HE Wet Scrubber

MR 026 Mill Line 9: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 19 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 32 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 10 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 35 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP ore crushing limitations. The limit is found in GP002.	40 CFR Part 63.9630(a); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-57**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 016 Phase I Bentonite Day Bins

GP 005 Pelletizing - Baghouses

MR 027 Phase I Bentonite Day Bin: Fabric Filter

What to do	Why to do it
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average measured across the fabric filter, per operation parameters submitted on 12/21/2005 via e-mail. This limit applies during all operating periods.	Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 017 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 017 Phase II Bentonite Day Bins

GP 005 Pelletizing - Baghouses

MR 028 Phase II Bentonite Day Bin: Fabric Filter

What to do	Why to do it
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average measured across the fabric filter, per operation parameters submitted on 12/21/2005 via e-mail. This limit applies during all operating periods.	Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-59**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 018 Wet Scrubber-High Efficiency****Associated Items:** EU 018 Phase I Hearth Layer Bin/Layer Feed

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 029 Phase I Hearth Layer Bin: HE Wet Scrubber

MR 030 Phase I Hearth Layer Bin: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 32 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 0.5 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 15 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

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

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 019 Wet Scrubber-High Efficiency****Associated Items:** EU 019 Phase II Hearth Layer Bin/Layer Feed

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 031 Phase II Hearth Layer Bin: HE Wet Scrubber

MR 032 Phase II Hearth Layer Bin: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.7 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 22 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 0.5 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 15 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-61**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 020 Wet Scrubber-High Efficiency****Associated Items:** EU 018 Phase I Hearth Layer Bin/Layer Feed

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 033 Phase I Hearth Layer Feed: HE Wet Scrubber

MR 034 Phase I Hearth Layer Feed: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.7 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 28 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 15 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-62**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 021 Wet Scrubber-High Efficiency**Associated Items:** EU 019 Phase II Hearth Layer Bin/Layer Feed

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 035 Phase II Hearth Layer Feed: HE Wet Scrubber

MR 036 Phase II Hearth Layer Feed: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.8 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 48 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 0.2 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 15 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-63**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 022 Venturi Scrubber**Associated Items:** EU 020 Pellet Indurating Furnace Line No 1

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 037 Furnace Line 1 Venturi Scrubber

MR 038 Furnace Line 1 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.7 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 715 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-64**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 023 Venturi Scrubber**Associated Items:** EU 020 Pellet Indurating Furnace Line No 1

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 039 Furnace Line 1 Venturi Scrubber

MR 040 Furnace Line 1 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.6 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 11/8-11/12, 2005 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 629 gallons/minute using 24-hour Block Average, per operating parameters from 11/8-11/12, 2005 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-65**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 024 Venturi Scrubber**Associated Items:** EU 020 Pellet Indurating Furnace Line No 1

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 041 Furnace Line 1 Venturi Scrubber

MR 042 Furnace Line 1 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.1 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 723 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-66**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 025 Venturi Scrubber**Associated Items:** EU 020 Pellet Indurating Furnace Line No 1

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 043 Furnace Line 1 Venturi ScrubberFurnace Line 1 Venturi Scrubber

MR 044 Furnace Line 1 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.4 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 445 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

Subject Item: CE 026 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

Associated Items: EU 020 Pellet Indurating Furnace Line No 1  
GP 003 Furnaces Nos. 1-3  
GP 008 Point Sources and Fugitive Sources Subject to MACT  
GP 009 Point Sources Subject to Taconite MACT  
GP 012 Indurating Sources Subject to Taconite MACT  
GP 018 Multiclones Subject to Taconite MACT  
MR 045 Line 1 Multiclone

What to do	Why to do it
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the Multiclone for, per operation parameters submitted on 12/21/2005 via e-mail.	Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-68**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 027 Venturi Scrubber**Associated Items:** EU 021 Pellet Indurating Furnace Line No 2

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 046 Furnace Line 2 Venturi Scrubber

MR 047 Furnace Line 2 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.3 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 412 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-69**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 028 Venturi Scrubber**Associated Items:** EU 021 Pellet Indurating Furnace Line No 2

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 048 Furnace Line 2 Venturi Scrubber

MR 049 Furnace Line 2 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.9 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 5/14-5/20, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 327 gallons/minute using 24-hour Block Average, per operating parameters from 5/14-5/20, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-70**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 029 Venturi Scrubber**Associated Items:** EU 021 Pellet Indurating Furnace Line No 2

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 050 Furnace Line 2 Venturi Scrubber

MR 051 Furnace Line 2 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.9 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 11/24-12/30, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 305 gallons/minute using 24-hour Block Average, per operating parameters from 11/24-12/30, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-71**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 030 Venturi Scrubber**Associated Items:** EU 021 Pellet Indurating Furnace Line No 2

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 052 Furnace Line 2 Venturi Scrubber

MR 053 Furnace Line 2 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.1 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 5/14-5/20, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 351 gallons/minute using 24-hour Block Average, per operating parameters from 5/14-5/20, 2008 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

Subject Item: CE 031 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

- Associated Items:
- EU 021 Pellet Indurating Furnace Line No 2
  - GP 003 Furnaces Nos. 1-3
  - GP 008 Point Sources and Fugitive Sources Subject to MACT
  - GP 009 Point Sources Subject to Taconite MACT
  - GP 012 Indurating Sources Subject to Taconite MACT
  - GP 018 Multiclones Subject to Taconite MACT
  - MR 054 Line 2 Multiclone

What to do	Why to do it
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the Multiclone for, per operation parameters submitted on 12/21/2005 via e-mail.	Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-73**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 032 Venturi Scrubber**Associated Items:** EU 022 Pellet Indurating Furnace Line No 3

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 055 Furnace Line 3 Venturi Scrubber

MR 056 Furnace Line 3 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 4.0 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 445 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-74**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 033 Venturi Scrubber**Associated Items:** EU 022 Pellet Indurating Furnace Line No 3

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 057 Furnace Line 3 Venturi Scrubber

MR 058 Furnace Line 3 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.2 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 419 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-75**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 034 Venturi Scrubber**Associated Items:** EU 022 Pellet Indurating Furnace Line No 3

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 059 Furnace Line 3 Venturi Scrubber

MR 060 Furnace Line 3 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.9 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 431 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-76**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 035 Venturi Scrubber**Associated Items:** EU 022 Pellet Indurating Furnace Line No 3

GP 003 Furnaces Nos. 1-3

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 012 Indurating Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 061 Furnace Line 3 Venturi Scrubber

MR 062 Furnace Line 3 Venturi Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.3 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 436 gallons/minute using 24-hour Block Average, per operating parameters from 4/24-4/27, 2007 performance tests.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
DIRECT HEATING EQUIPMENT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.5 inches of water column using 24-hour Block Average measured across the Venturi of the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 300 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due 900 days before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Permit Issuance to measure front-half particulate matter to demonstrate compliance with the Taconite NESHAP indurating furnace limitations.	40 CFR Section 63.9630(b); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	



TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

Subject Item: CE 036 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones

- Associated Items:
- EU 022 Pellet Indurating Furnace Line No 3
  - GP 003 Furnaces Nos. 1-3
  - GP 008 Point Sources and Fugitive Sources Subject to MACT
  - GP 009 Point Sources Subject to Taconite MACT
  - GP 012 Indurating Sources Subject to Taconite MACT
  - GP 018 Multiclones Subject to Taconite MACT
  - MR 063 Line 3 Multiclone

What to do	Why to do it
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the Multiclone for, per operation parameters submitted on 12/21/2005 via e-mail.	Minn. R. 7011.0610; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-78**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 037 Wet Scrubber-High Efficiency****Associated Items:** EU 023 Pellet Machine Discharge Line No 1

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 064 Machine Discharge Line 1: HE Wet Scrubber

MR 065 Machine Discharge Line 1: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.9 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 72 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 55 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-79**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 038 Wet Scrubber-High Efficiency****Associated Items:** EU 024 Pellet Machine Discharge Line No 2

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 066 Machine Discharge Line 2: HE Wet Scrubber

MR 067 Machine Discharge Line 2: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.6 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 62 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 55 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-80**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 039 Wet Scrubber-High Efficiency****Associated Items:** EU 025 Pellet Machine Discharge Line No 3

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 068 Machine Discharge Line 3: HE Wet Scrubber

MR 069 Machine Discharge Line 3: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.1 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 51 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 55 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-81**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 040 Wet Scrubber-High Efficiency****Associated Items:** EU 026 Pellet Hearth Layer Screening

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 070 Hearth Layer Screen: HE Wet Scrubber

MR 071 Hearth Layer Screen: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 0.50 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 30 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.0 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 15 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-82**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: CE 041 Wet Scrubber-High Efficiency****Associated Items:** EU 027 Pellet Transfer House

GP 004 Pelletizing - Scrubbers

GP 008 Point Sources and Fugitive Sources Subject to MACT

GP 009 Point Sources Subject to Taconite MACT

GP 011 Finished Pellet Handling Sources Subject to Taconite MACT

GP 014 Wet Scrubbers Subject to Taconite MACT

MR 072 Pellet Transfer House: HE Wet Scrubber

MR 073 Pellet Transfer House: HE Wet Scrubber

What to do	Why to do it
MACT PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 3.7 inches of water column using 24-hour Block Average measured across the Wet Scrubber.	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
Water flow rate: greater than or equal to 29 gallons/minute using 24-hour Block Average	40 CFR Part 63.9590(b)(1); Minn. R. 7011.8030; Minn. R. 7007.0800, subps. 2 and 14
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 2.5 inches of water column using 24-hour Block Average measured across the Wet Scrubber, per operation parameters submitted on 12/21/2005 via e-mail.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
Water flow rate: greater than or equal to 40 gallons/minute using 24-hour Block Average, per operation parameters submitted on 12/21/2005 via e-mail. Downtime of 15 or more minutes is not to be included as operating time.	40 CFR Section 64.7: CAM and Minn. R. 7017.0200; Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3
PERFORMANCE TESTING REQUIREMENTS	hdr
Also see GP008.	
Performance Test: due before end of each 60 months following Permit Issuance to measure front-catch particulate matter to demonstrate compliance with Taconite NESHAP finished pellet handling limitations. The limit is found in GP004.	40 CFR Part 63.9630(c); Minn. R. 7011.8030; Minn. R. 7017.2020, subp. 1
MONITORING, RECORDKEEPING AND REPORTING REQUIREMENTS	hdr
See GP008 and GP009.	

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-83**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 042 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 028 Bentonite Storage Silo - East

GP 005 Pelletizing - Baghouses

MR 074 Bentonite Silo - East: Fabric Filter

What to do	Why to do it
IPER PARAMETRIC LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the fabric filter, per operation parameters submitted on 12/22/2005 via e-mail. Note that this baghouse is operated when the silo is being loaded or unloaded; therefore, pressure drop monitoring will not be continuous through any given day (batch operation). This limit applies during all operating periods.	Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

Subject Item: CE 043 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

Associated Items: EU 029 Bentonite Storage Silo - West  
GP 005 Pelletizing - Baghouses  
MR 075 Bentonite Silo - West: Fabric Filter

What to do	Why to do it
POLLUTION CONTROL EQUIPMENT LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the fabric filter, per operation parameters submitted on 12/22/2005 via e-mail. Note that this baghouse is operated when the silo is being loaded or unloaded; therefore, pressure drop monitoring will not be continuous through any given day (batch operation). This limit applies during all operating periods.	Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3



**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-85**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item:** CE 044 Fabric Filter - Low Temperature, i.e., T<180 Degrees F**Associated Items:** EU 033 Limestone Storage Silo

GP 005 Pelletizing - Baghouses

MR 076 Limestone Silo: Fabric Filter

What to do	Why to do it
POLLUTION CONTROL EQUIPMENT LIMITS	hdr
Pressure Drop: greater than or equal to 1.0 inches of water column using 24-hour Block Average across the fabric filter, per operation parameters submitted on 12/22/2005 via e-mail. Note that this baghouse is operated when the silo is being loaded or unloaded; therefore, pressure drop monitoring will not be continuous through any given day (batch operation). This limit applies during all operating periods.	Minn. R. 7011.0715; Minn. R. 7007.0800, subps. 2 and 14; Minn. R. 7017.2025, subp. 3

**TABLE A: LIMITS AND OTHER REQUIREMENTS****A-86**

01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

**Subject Item: BG 003 Pelletizing Phase II**

What to do	Why to do it
Performance Test: due 120 days after Startup for NOx. The Permittee shall conduct a performance test for NOx on a least one indurating furnace to validate the NOx emission factor used in the netting analysis for the burner replacement/modification. If this performance test determines that the actual NOx emission factor after the burner replacement/modification is higher than what was used in the netting analysis, the Permittee shall reevaluate PSD applicability for the burner replacement/modification.	TBD

## TABLE B: SUBMITTALS

B-1 01/14/10

Facility Name: Hibbing Taconite Co  
Permit Number: 13700061 - 003

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

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

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

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

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

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

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

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

Send any application for a permit or permit amendment to:

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

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

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

**TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS****B-2** 01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Monitoring Plan	<p>due 180 days after Resuming Operation. The Permittee shall develop and submit to the Commissioner for approval a site-specific monitoring plan for each multiclone that addresses the following:</p> <p>(1) A description of the device. (2) Test results collected in accordance with 40 CFR section 63.9621 verifying the performance of the device for reducing emissions of particulate matter to the atmosphere to the levels required by 40 CFR pt. 63, subp. RRRRR. (3) A copy of the operation and maintenance plan required in 40 CFR section 63.9600(b). (4) Appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emission limitation(s).</p> <p>The Permittee shall maintain a current copy of the monitoring plan onsite, and it must be available for inspection upon request. The plan must be kept for the life of the affected source or until the affected source is no longer subject to the requirements of 40 CFR pt.63, subp. RRRRR.</p>	GP018
Notification	due 15 days after Resuming Operation. The Permittee shall submit a notification of the actual date of Resuming Operation.	Total Facility

**TABLE B: RECURRENT SUBMITTALS****B-3** 01/14/10

Facility Name: Hibbing Taconite Co

Permit Number: 13700061 - 003

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	<p>due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). The Permittee shall submit this on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.</p> <p>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.</p>	Total Facility

**APPENDIX MATERIAL**

**Facility Name: Hibbing Taconite Co**  
**Permit Number: 13700061-003**

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

**B – Visible Emissions Checklist**

**C – Insignificant Activities (Required to be Listed)**

**D - Modeling Input Parameters (submitted on April 9, 1998)**

## **APPENDIX B**

### **VISIBLE EMISSION CHECKS**

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

Emission Units and Stack/Vents:

Visible Emissions Checklist(s): The Permittee shall use one or more checklists until such time as broken bag detectors are installed. The checklist or checklists must contain the following:

Visible Emissions 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 (temperature, cloud cover, wind, 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 Title V permit.

## APPENDIX B

### EXAMPLE VISIBLE EMISSION CHECKLIST

Visual inspection of each stack is to be recorded on day shift Saturday through Friday.  
 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 a moisture plume limits visible emissions observations.  
 If the piece of control equipment is down for more than one hour and the service area is active,  
 notify the Environmental Engineer with the following information: EU and CE 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 the completed inspection form to the Environmental Engineer to  
 file.

EU	GP	SV	CE	Service Area	Sat	Sun	Mon	Tue	Wed	Thu	Fri
				Year_____ Date >>							
				Time							
				Initials							

Record corrective actions or comments for each "RA". Also record pressure for each unit that a  
 moisture plume or other difficulty interferes with the observation.

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



## APPENDIX C

### Insignificant Activities

IA	Emission Unit Description	Basis	General Applicable Requirements
	<b>Crushing</b>		
IA001	Crusher	Space heating < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA002	zinc melting pot	Misc < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
	<b>Concentrating</b>		
IA101	Concentrator Main Building	Space heating < 100 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA102	Concentrator out-buildings	Space heating < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA103	Reclaim Pumphouse	Space heating < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA105	Boiler	Hot water < 1 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
	Remaining Indoor Conveyor Transfer Points Associated with Barmac Crusher Project		40 CFR pt. 60, subp. LL
	<b>Pelletizing</b>		
IA201	Pelletizing Main Building	Space Heating < 120 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA202	Pelletizing out-buildings	Space Heating < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA203	Boiler	Hot water < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
	<b>Maintenance Services</b>		
IA301	Space Heating	Main shops/warehouse < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA302	Space Heating	Belt Shop < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA303	Space Heating	out-buildings - plant water pumphouse, oilhouse, waste water treatment plant < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA304	Process Heating	Town Border Station - natural gas < 0.1 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA305	Building AQ	Welding fume exhauster ~ 8000 scfm	Minn. R. 7011.0710/0715 (PM and opacity)

IA	Emission Unit Description	Basis	General Applicable Requirements
	<b>Mining</b>		
IA401	Space heating	Mine Service Building (MSB) < 100 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA402	Space heating	Mine Service Center (MSC) < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA403	Space heating	Mining out-buildings < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA404	Hot water	MSB Boiler < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA405	Building AQ	Diesel exhauster ~ 30000 scfm	Minn. R. 7011.0710/0715 (PM and opacity)
	<b>General</b>		
IA501	Space Heating	Administration Building < 5 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA502	Space Heating	Portable heaters < 20 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA503	Lighting	Diesel powered light plants < 10 MMBtu/hr	Minn. R. 7011.2300 (PM & opacity)
IA504	Compressed Air	Portable compressed air plants < 10 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
IA505	Hot water	Boiler < 1 MMBtu/hr	Minn. R. 7011.0510/.0515 (PM & opacity)
	<b>Tanks</b>		
H207	Gasoline	10,000 Gallons – VOC emissions < 1.0 ton/year	Minn. R. 7011.1505
V3019	Antifreeze/Water	1000 Gallons – vapor pressure < 1.0 psia @ 60 °F	Minn. R. 7011.1505
V3020	Antifreeze/Water	1000 Gallons – vapor pressure < 1.0 psia @ 60 °F	Minn. R. 7011.1505
4003	Diesel Fuel Oil	40,000 Gallons – VOC emissions < 1.0 ton/year	Minn. R. 7011.1505
4004	Diesel Fuel Oil	40,000 Gallons – VOC emissions < 1.0 ton/year	Minn. R. 7011.1505
4005	Diesel Fuel Oil	40,000 Gallons – VOC emissions < 1.0 ton/year	Minn. R. 7011.1505
4014	Used Antifreeze	2000 Gallons – VOC emissions < 2.28 lb/hr	Minn. R. 7011.1505
4039	Antifreeze 50/50	10,200 Gallons – VOC emissions < 2.28 lb/hr	Minn. R. 7011.1505
4056	Haul Road Dust Suppressant	45,000 Gallons – VOC emissions < 2.28 lb/hr	Minn. R. 7011.1505

## APPENDIX D

### Modeling Input Parameters

Volume in drive D has no label.  
Volume Serial Number is B479-D885

Directory of D:\HTCAPR98

03/20/98	09:31p	308,976	HTCNO72.LST
03/20/98	09:56p	308,976	HTCNO73.LST
03/20/98	10:20p	308,976	HTCNO74.LST
03/20/98	10:44p	308,976	HTCNO75.LST
03/20/98	11:07p	308,976	HTCNO76.LST
03/21/98	07:39a	438,009	HTCPM72A.LST
03/21/98	12:56a	656,907	HTCPM72D.LST
03/21/98	09:08p	438,009	HTCPM73A.LST
03/21/98	02:24p	656,907	HTCPM73D.LST
03/22/98	10:31a	438,009	HTCPM74A.LST
03/22/98	03:50a	656,907	HTCPM74D.LST
03/22/98	11:31p	438,009	HTCPM75A.LST
03/22/98	05:01p	656,907	HTCPM75D.LST
03/23/98	11:28p	438,009	HTCPM76A.LST
03/23/98	06:04a	656,907	HTCPM76D.LST
03/20/98	06:36p	969,700	HTCSO72.LST
03/20/98	07:16p	969,700	HTCSO73.LST
03/20/98	07:54p	969,700	HTCSO74.LST
03/20/98	08:32p	969,700	HTCSO75.LST
03/20/98	09:07p	969,700	HTCSO76.LST
20 File(s)		11,867,960 bytes	
		657,006,592 bytes free	

D:\HTCAPR98\HTCNO72.LST  
D:\HTCAPR98\HTCNO73.LST  
D:\HTCAPR98\HTCNO74.LST  
D:\HTCAPR98\HTCNO75.LST  
D:\HTCAPR98\HTCNO76.LST  
D:\HTCAPR98\HTCPM72A.LST  
D:\HTCAPR98\HTCPM72D.LST  
D:\HTCAPR98\HTCPM73A.LST  
D:\HTCAPR98\HTCPM73D.LST  
D:\HTCAPR98\HTCPM74A.LST  
D:\HTCAPR98\HTCPM74D.LST  
D:\HTCAPR98\HTCPM75A.LST  
D:\HTCAPR98\HTCPM75D.LST  
D:\HTCAPR98\HTCPM76A.LST  
D:\HTCAPR98\HTCPM76D.LST  
D:\HTCAPR98\HTCSO72.LST  
D:\HTCAPR98\HTCSO73.LST  
D:\HTCAPR98\HTCSO74.LST  
D:\HTCAPR98\HTCSO75.LST  
D:\HTCAPR98\HTCSO76.LST

20010521 132243.390



Facility Name: Hibbing Taconite Company  
Permit Number: 13700061-003 01/15/10

HIBTAC PS019 , PS020 , PS021 , PS022 , PS023 , PS024 , PS025 , PS026 , PS027 , PS028 ,  
PS029 , PS030 ,  
PS044 , PS045 , PS046 ,

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

SURFACE STATION NO.: 94931

UPPER AIR STATION NO.: 14926

\*\*\* ISCST3 - VERSION 97363 \*\*\* \*\*\* PM10 Annual 1972 Modeling Input File \*\*\*  
 03/21/98

\*\*\* Hibbing Taconite Facility

\*\*\*

00:56:40  
 D:\HTCAPR98\HTCPM72A.LST

PAGE 1

\*MODELOPTs: CONC

RURAL ELEV DFAULT  
 \*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

-----  
 \*Intermediate Terrain Processing is Selected  
 \*Model Is Setup For Calculation of Average CONCENTRATION Values.  
 -- SCAVENGING/DEPOSITION LOGIC --  
 \*Model Uses NO DRY DEPLETION. DDPLETE = F  
 \*Model Uses NO WET DEPLETION. WDPLETE = F  
 \*NO WET SCAVENGING Data Provided.  
 \*Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations  
 \*Model Uses RURAL Dispersion.  
 \*Model Uses Regulatory DEFAULT Options:  
 1. Final Plume Rise.  
 2. Stack-tip Downwash.  
 3. Buoyancy-induced Dispersion.  
 4. Use Calms Processing Routine.  
 5. Not Use Missing Data Processing Routine.  
 6. Default Wind Profile Exponents.  
 7. Default Vertical Potential Temperature Gradients.  
 8. "Upper Bound" Values for Supersquat Buildings.  
 9. No Exponential Decay for RURAL Mode

\*Model Accepts Receptors on ELEV Terrain.  
 \*Model Assumes No FLAGPOLE Receptor Heights.  
 \*Model Calculates PERIOD Averages Only  
 \*This Run Includes: 95 Source(s); 2 Source Group(s); and 644 Receptor(s)  
 \*The Model Assumes A Pollutant Type of: PM10  
 \*Model Set To Continue RUNNING After the Setup Testing.  
 \*Output Options Selected:  
 Model Outputs Tables of PERIOD Averages by Receptor  
 Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
 m for Missing Hours  
 b for Both Calm and Missing Hours  
 \*Misc. Inputs: Anem. Hgt. (m) = 8.50 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0  
 Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M\*\*3  
 \*Input Runstream File: htcpm72a.dat ; \*\*Output Print File: htcpm72a.lst  
 \*File Created for Event Model: C:\MODELS\HIBTAC\HTCPM72A.EVT

NUMBER EMISSION RATE				*** POINT SOURCE DATA ***							
				BASE	STACK	STACK	STACK	STACK	BUILDING		
EMISSION RATE	SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS
SCALAR VARY	ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		
BY											
PS001	0	0.41100E+00	502282.6	5257664.0	527.3	12.20	299.70	22.48	0.61	YES	
PS002	0	0.41100E+00	502258.9	5257659.5	527.3	12.20	299.70	22.48	0.61	YES	
PS003	0	0.73800E+00	502268.3	5257667.5	527.3	18.60	296.90	24.41	0.91	YES	
PS004	0	0.34900E+00	502334.2	5257923.5	515.1	18.60	302.40	23.76	0.55	YES	
PS005	0	0.34900E+00	502312.5	5257920.5	515.1	18.60	302.40	23.76	0.55	YES	
PS006	0	0.34900E+00	502290.2	5257916.5	515.1	18.60	302.40	23.76	0.55	YES	
PS007	0	0.34900E+00	502269.2	5257912.5	515.1	18.60	302.40	23.76	0.55	YES	
PS008	0	0.34900E+00	502247.1	5257909.0	515.1	18.60	302.40	23.76	0.55	YES	
PS009	0	0.34900E+00	502224.5	5257905.5	515.1	18.60	302.40	23.76	0.55	YES	
PS010	0	0.34900E+00	502202.7	5257902.0	515.1	18.60	302.40	23.76	0.55	YES	
PS011	0	0.34900E+00	502180.9	5257897.0	515.1	18.60	302.40	23.76	0.55	YES	
PS012	0	0.34900E+00	502158.7	5257895.0	515.1	18.60	302.40	23.76	0.55	YES	
PS013	0	0.31200E+00	502421.9	5258113.5	496.8	33.20	299.10	7.54	0.98	YES	
PS014	0	0.21700E+00	502516.3	5258132.0	496.8	33.20	299.10	7.54	0.98	YES	
PS015	0	0.11200E+01	502427.3	5258122.0	496.8	33.20	304.10	19.32	1.07	YES	
PS016	0	0.96500E+00	502508.5	5258137.5	496.8	33.20	304.10	7.44	1.07	YES	
PS017	0	0.53900E+00	502420.8	5258133.5	496.8	33.20	308.60	20.06	1.07	YES	
PS018	0	0.48300E+00	502509.4	5258149.0	496.8	32.30	308.60	11.88	1.07	YES	
PS019	0	0.31500E+01	502381.1	5258096.5	496.8	36.30	313.60	17.00	2.68	YES	
PS020	0	0.31500E+01	502391.3	5258097.5	496.8	36.30	313.60	17.00	2.68	YES	
PS021	0	0.31500E+01	502398.9	5258098.5	496.8	36.30	313.60	17.00	2.68	YES	
PS022	0	0.31500E+01	502407.3	5258100.5	496.8	36.30	313.60	17.00	2.68	YES	
PS023	0	0.31500E+01	502439.2	5258102.5	496.8	36.30	313.60	17.00	2.68	YES	
PS024	0	0.31500E+01	502448.0	5258105.0	496.8	36.30	313.60	17.00	2.68	YES	
PS025	0	0.31500E+01	502458.1	5258106.5	496.8	36.30	313.60	17.00	2.68	YES	
PS026	0	0.31500E+01	502468.1	5258109.0	496.8	36.30	313.60	17.00	2.68	YES	
PS027	0	0.31500E+01	502482.2	5258113.5	496.8	36.30	313.60	17.00	2.68	YES	
PS028	0	0.31500E+01	502490.9	5258113.5	496.8	36.30	313.60	17.00	2.68	YES	
PS029	0	0.31500E+01	502499.3	5258115.5	496.8	36.30	313.60	17.00	2.68	YES	
PS030	0	0.31500E+01	502505.0	5258117.0	496.8	36.30	313.60	17.00	2.68	YES	
PS031	0	0.11400E+01	502398.0	5258188.0	496.8	35.40	301.30	23.18	1.52	YES	
PS032	0	0.11400E+01	502414.5	5258191.0	496.8	35.40	301.30	23.18	1.52	YES	

Facility Name: Hibbing Taconite Company  
Permit Number: 13700061-003 01/15/10

PS033	0	0.11400E+01	502496.7	5258208.0	496.8	35.40	301.30	23.18	1.52	YES
PS034	0	0.22400E+01	502392.1	5258195.0	496.8	35.70	294.70	18.48	1.07	YES
PS035	0	0.13400E+01	502330.8	5258183.0	496.8	19.80	295.80	13.58	1.01	YES
PS036	0	0.18100E+00	502324.8	5258236.5	489.2	22.90	291.30	18.11	0.30	YES
PS037	0	0.23300E+00	502344.4	5258248.0	489.2	22.90	291.30	18.11	0.30	YES
PS038	0	0.00000E+00	502383.4	5258245.5	489.2	21.60	280.20	0.01	0.76	YES
PS039	0	0.67500E+00	502428.3	5258335.0	490.7	46.90	280.20	0.01	0.76	NO
PS040	0	0.67500E+00	502448.6	5258348.5	490.7	38.40	280.20	0.01	0.76	NO
*** POINT SOURCE DATA ***										
EMISSION RATE		NUMBER	EMISSION RATE		BASE	STACK	STACK	STACK	STACK	BUILDING
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS
SCALAR VARY										
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)	
BY										
PS041	0	0.67500E+00	502423.8	5258340.5	490.7	33.80	305.20	0.01	3.44	NO
PS042	0	0.00000E+00	502434.6	5258339.5	490.7	44.20	305.20	0.01	0.76	NO
PS043	0	0.00000E+00	502444.4	5258352.5	490.7	33.80	305.20	0.01	3.44	NO
PS044	0	0.44100E-02	502266.6	5258186.0	490.7	9.40	477.40	0.01	0.41	YES
PS045	0	0.13900E-01	502400.6	5258112.0	496.8	5.30	755.20	0.01	0.18	YES
PS046	0	0.16400E-01	502499.8	5258133.0	496.8	9.10	755.20	0.01	0.25	YES
PS047	0	0.98300E-01	502458.8	5257879.0	512.1	9.10	291.30	0.01	0.61	YES
PS048	0	0.52900E-01	502114.6	5257918.0	502.9	4.60	288.60	0.01	1.03	YES
PS049	0	0.52900E-01	502074.4	5257905.5	502.9	9.10	288.60	0.01	1.03	YES
PS050	0	0.52900E-01	502040.1	5257923.5	502.9	15.20	288.60	0.01	1.03	YES
PS051	0	0.52900E-01	502055.1	5257872.5	502.9	15.20	288.60	0.01	1.03	YES
PS052	0	0.12300E+00	502170.9	5257896.5	515.1	19.50	288.60	18.62	0.41	YES
PS053	0	0.12300E+00	502192.6	5257900.5	515.1	19.50	288.60	19.48	0.40	YES
PS054	0	0.13000E+00	502607.4	5258152.0	509.0	22.90	280.20	0.01	0.29	YES
PS055	0	0.38900E+00	502608.9	5258147.5	509.0	2.10	280.20	0.01	1.22	YES
INL_0003	0	0.49870E+02	536100.0	5267300.0	493.8	2.44	292.00	8.16	0.94	NO
ETE_0009	0	0.20490E+02	533200.0	5258900.0	457.2	1.10	298.00	25.87	0.76	NO
ETF_0013	0	0.10919E+03	533400.0	5254300.0	457.2	4.27	298.00	11.09	0.09	NO
LTV_0037	0	0.64243E+03	564600.0	5271500.0	487.7	6.10	298.00	7.76	0.15	NO
VPU_0039	0	0.42740E+02	534500.0	5263100.0	435.9	39.62	455.00	10.19	2.20	NO
MPS_0042	0	0.47660E+02	563000.0	5264300.0	442.0	27.13	298.00	26.71	0.24	NO
HPU_0043	0	0.49920E+02	505000.0	5252650.0	457.2	35.05	450.00	11.89	2.35	NO
NAT_0045	0	0.25000E+01	495400.0	5251000.0	451.0	19.20	298.00	17.30	0.82	NO
NAT_0046	0	0.25500E+01	495400.0	5251000.0	451.0	35.05	298.00	17.63	0.61	NO
NAT_0047	0	0.16300E+01	495400.0	5251000.0	451.0	42.37	303.00	13.04	0.76	NO
NAT_0048	0	0.41000E+00	495400.0	5251000.0	451.0	27.13	298.00	12.29	0.34	NO
NAT_0049	0	0.22600E+01	495400.0	5251000.0	451.0	46.02	797.00	12.83	4.27	NO
NAT_0050	0	0.66480E+02	495400.0	5251000.0	451.0	41.76	394.00	16.44	3.87	NO
NAT_0051	0	0.80660E+02	495400.0	5251000.0	451.0	47.24	389.00	10.98	3.96	NO
HWP_0053	0	0.11100E+02	523600.0	5300900.0	408.4	10.06	298.00	8.28	0.76	NO
POT_0056	0	0.57200E+01	525600.0	5293600.0	408.4	33.53	342.00	6.73	1.31	NO
USX_S027	0	0.15527E+03	528171.0	5268032.0	527.6	31.26	292.00	8.69	0.38	NO
MPB_SV03	0	0.31801E+03	450600.0	5234100.0	394.1	213.36	353.00	15.59	8.84	NO
*** AREA SOURCE DATA ***										
EMISSION RATE		NUMBER	EMISSION RATE	COORD (SW CORNER)	BASE	RELEASE	X-DIM	Y-DIM	ORIENT.	INIT.
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	OF AREA	OF AREA	OF AREA	SZ
SCALAR VARY										
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.)	(METERS)
BY										
MINE001	0	0.80200E-06	504044.6	5255706.5	457.2	3.05	1524.00	1371.60	0.00	0.00
MINE002	0	0.57700E-06	501149.0	5254792.0	442.0	3.05	1066.80	609.60	0.00	0.00
MINE003	0	0.29100E-06	499472.6	5253877.5	432.8	3.05	609.60	609.60	0.00	0.00
MINE004	0	0.10900E-05	500387.0	5254258.5	457.2	3.05	1219.20	304.80	0.00	0.00
PILE001	0	0.10200E-06	503130.2	5257535.0	518.2	3.05	2362.20	1219.20	0.00	0.00
PILE002	0	0.11400E-06	500996.6	5256621.0	539.5	3.05	1219.20	914.40	0.00	0.00
PILE003	0	0.18500E-08	500387.0	5256621.0	539.5	3.05	609.60	304.80	0.00	0.00
PILE004	0	0.11400E-06	499320.2	5254792.0	487.7	3.05	1676.40	1219.20	0.00	0.00
PILE005	0	0.15300E-06	505890.0	5255725.0	481.6	3.05	550.00	410.00	0.00	0.00
ROADS	0	0.61900E-06	499931.2	5254646.5	442.0	3.05	4886.60	3076.50	0.00	0.00
TDUMP	0	0.39700E-02	502236.1	5257671.0	524.3	3.05	29.00	12.20	-9.26	0.00
ORELOAD	0	0.26600E-02	502240.9	5257641.5	524.3	0.00	29.00	12.20	-9.26	0.00
FCS	0	0.10800E-06	502117.3	5257762.0	518.2	9.14	304.80	103.60	-9.26	0.00
PS	0	0.16400E-05	502449.1	5257998.5	502.9	4.57	118.90	38.10	-9.26	0.00
PSRECL	0	0.10300E-04	502357.3	5258225.0	490.7	4.57	41.10	41.10	0.00	0.00
TAIL001	0	0.83900E-08	499794.2	5257007.0	475.5	0.00	4572.00	2590.80	-36.03	0.00
TAIL002	0	0.83900E-08	499590.2	5260115.0	460.2	0.00	4392.00	1236.00	-36.03	0.00
TAIL003	0	0.83900E-08	502944.2	5260451.0	460.2	0.00	1140.00	1740.00	-36.03	0.00
TAIL004	0	0.78800E-07	501198.2	5257631.0	475.5	0.00	1272.00	1026.00	-39.59	0.00
TAIL005	0	0.78800E-07	501402.2	5259635.0	475.5	0.00	195.00	448.00	0.00	0.00
TAIL006	0	0.78800E-07	499102.4	5258615.0	475.5	0.00	304.80	304.80	0.00	0.00
TAIL007	0	0.78800E-07	499102.4	5257691.0	475.5	0.00	304.80	304.80	0.00	0.00
ALL	PS001	, PS002	, PS003	, PS004	, PS005	, PS006	, PS007	, PS008	, PS009	, PS010
PS011	, PS012	, PS013	, PS014	, PS015	, PS016	, PS017	, PS018	, PS019	, PS020	, PS021
PS023	, PS024	, PS025	, PS026	, PS027	, PS028	, PS029	, PS030	, PS031	, PS032	, PS033
PS035	, PS036	, PS037	, PS038	, PS039	, PS040	, PS041	, PS042	, PS043	, PS044	, PS045
PS047	, PS048									, PS046

Facility Name: Hibbing Taconite Company  
 Permit Number: 13700061-003 01/15/10

MINE004 , PS049 , PS050 , PS051 , PS052 , PS053 , PS054 , PS055 , MINE001 , MINE002 , MINE003 ,  
 PILE001 ,  
 PILE002 , PILE003 , PILE004 , PILE005 , ROADS , TDUMP , ORELOAD , FCS , PS , PSRECL ,  
 TAIL001 , TAIL002 ,  
 TAIL003 , TAIL004 , TAIL005 , TAIL006 , TAIL007 , INL\_0003 , ETE\_0009 , ETF\_0013 , LTV\_0037 , VPU\_0039 ,  
 MPS\_0042 , HPU\_0043 ,  
 NAT\_0045 , NAT\_0046 , NAT\_0047 , NAT\_0048 , NAT\_0049 , NAT\_0050 , NAT\_0051 , HWP\_0053 , POT\_0056 , USX\_S027 ,  
 MPB\_SV03 ,  
 HIBTAC , PS001 , PS002 , PS003 , PS004 , PS005 , PS006 , PS007 , PS008 , PS009 , PS010 ,  
 PS011 , PS012 ,  
 PS013 , PS014 , PS015 , PS016 , PS017 , PS018 , PS019 , PS020 , PS021 , PS022 ,  
 PS023 , PS024 ,  
 PS025 , PS026 , PS027 , PS028 , PS029 , PS030 , PS031 , PS032 , PS033 , PS034 ,  
 PS035 , PS036 ,  
 PS037 , PS038 , PS039 , PS040 , PS041 , PS042 , PS043 , PS044 , PS045 , PS046 ,  
 PS047 , PS048 ,  
 PS049 , PS050 , PS051 , PS052 , PS053 , PS054 , PS055 , MINE001 , MINE002 , MINE003 ,  
 MINE004 , PILE001 ,  
 PILE002 , PILE003 , PILE004 , PILE005 , ROADS , TDUMP , ORELOAD , FCS , PS , PSRECL ,  
 TAIL001 , TAIL002 ,  
 TAIL003 , TAIL004 , TAIL005 , TAIL006 , TAIL007 ,

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
 (METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

SURFACE STATION NO.: 94931

UPPER AIR STATION NO.: 14926



\*\*\* ISCST3 - VERSION 97363 \*\*\* \*\*\* PM10 24-Hour 1972 Modeling Input File  
\*\*\* 03/20/98

\*\*\* Hibbing Taconite Facility

\*\*\*

18:13:05  
D:\HTCAPR98\HTCPM72D.LST

PAGE 1

\*MODELOPTs: CONC

RURAL ELEV DFAULT  
\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

\*Intermediate Terrain Processing is Selected  
\*Model Is Setup For Calculation of Average CONCentration Values.

-- SCAVENGING/DEPOSITION LOGIC --

\*Model Uses NO DRY DEPLETION. DDPLETE = F

\*Model Uses NO WET DEPLETION. WDPLETE = F

\*NO WET SCAVENGING Data Provided.

\*Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations

\*Model Uses RURAL Dispersion.

\*Model Uses Regulatory DEFAULT Options:

1. Final Plume Rise.
2. Stack-tip Downwash.
3. Buoyancy-induced Dispersion.
4. Use Calms Processing Routine.
5. Not Use Missing Data Processing Routine.
6. Default Wind Profile Exponents.
7. Default Vertical Potential Temperature Gradients.
8. "Upper Bound" Values for Supersquat Buildings.
9. No Exponential Decay for RURAL Mode

\*Model Accepts Receptors on ELEV Terrain.

\*Model Assumes No FLAGPOLE Receptor Heights.

\*Model Calculates 1 Short Term Average(s) of: 24-HR

\*This Run Includes: 95 Source(s); 2 Source Group(s); and 644 Receptor(s)

\*The Model Assumes A Pollutant Type of: PM10

\*Model Set To Continue RUNNING After the Setup Testing.

\*Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing Hours  
b for Both Calm and Missing Hours  
\*Misc. Inputs: Anem. Hgt. (m) = 8.50 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =

0.10000E+07

Output Units = MICROGRAMS/M\*\*3

\*Input Runstream File: htcpm72d.dat

; \*\*Output Print File: htcpm72d.lst

\*File Created for Event Model: C:\MODELS\HIBTAC\HTCPM72D.EVT

\*\*\* POINT SOURCE DATA \*\*\*  
EMISSION RATE  
NUMBER EMISSION RATE  
BASE STACK STACK STACK STACK BUILDING  
SOURCE PART. (GRAMS/SEC) X Y ELEV. HEIGHT TEMP. EXIT VEL. DIAMETER EXISTS  
SCALAR VARY  
ID CATS. (METERS) (METERS) (METERS) (METERS) (DEG.K) (M/SEC) (METERS)  
BY  
PS001 0 0.41100E+00 502282.6 5257664.0 527.3 12.20 299.70 22.48 0.61 YES  
PS002 0 0.41100E+00 502258.9 5257659.5 527.3 12.20 299.70 22.48 0.61 YES  
PS003 0 0.73800E+00 502268.3 5257667.5 527.3 18.60 296.90 24.41 0.91 YES  
PS004 0 0.34900E+00 502334.2 5257923.5 515.1 18.60 302.40 23.76 0.55 YES  
PS005 0 0.34900E+00 502312.5 5257920.5 515.1 18.60 302.40 23.76 0.55 YES  
PS006 0 0.34900E+00 502290.2 5257916.5 515.1 18.60 302.40 23.76 0.55 YES  
PS007 0 0.34900E+00 502269.2 5257912.5 515.1 18.60 302.40 23.76 0.55 YES  
PS008 0 0.34900E+00 502247.1 5257909.0 515.1 18.60 302.40 23.76 0.55 YES  
PS009 0 0.34900E+00 502224.5 5257905.5 515.1 18.60 302.40 23.76 0.55 YES  
PS010 0 0.34900E+00 502202.7 5257902.0 515.1 18.60 302.40 23.76 0.55 YES  
PS011 0 0.34900E+00 502180.9 5257897.0 515.1 18.60 302.40 23.76 0.55 YES  
PS012 0 0.34900E+00 502158.7 5257895.0 515.1 18.60 302.40 23.76 0.55 YES  
PS013 0 0.31200E+00 502421.9 5258113.5 496.8 33.20 299.10 7.54 0.98 YES  
PS014 0 0.21700E+00 502516.3 5258132.0 496.8 33.20 299.10 7.54 0.98 YES  
PS015 0 0.11200E+01 502427.3 5258122.0 496.8 33.20 304.10 19.32 1.07 YES  
PS016 0 0.96500E+00 502508.5 5258137.5 496.8 33.20 304.10 7.44 1.07 YES  
PS017 0 0.53900E+00 502420.8 5258133.5 496.8 33.20 308.60 20.06 1.07 YES  
PS018 0 0.48300E+00 502509.4 5258149.0 496.8 32.30 308.60 11.88 1.07 YES  
PS019 0 0.31500E+01 502381.1 5258096.5 496.8 36.30 313.60 17.00 2.68 YES  
PS020 0 0.31500E+01 502391.3 5258097.5 496.8 36.30 313.60 17.00 2.68 YES  
PS021 0 0.31500E+01 502398.9 5258098.5 496.8 36.30 313.60 17.00 2.68 YES  
PS022 0 0.31500E+01 502407.3 5258100.5 496.8 36.30 313.60 17.00 2.68 YES  
PS023 0 0.31500E+01 502439.2 5258102.5 496.8 36.30 313.60 17.00 2.68 YES  
PS024 0 0.31500E+01 502448.0 5258105.0 496.8 36.30 313.60 17.00 2.68 YES  
PS025 0 0.31500E+01 502458.1 5258106.5 496.8 36.30 313.60 17.00 2.68 YES  
PS026 0 0.31500E+01 502468.1 5258109.0 496.8 36.30 313.60 17.00 2.68 YES  
PS027 0 0.31500E+01 502482.2 5258113.5 496.8 36.30 313.60 17.00 2.68 YES  
PS028 0 0.31500E+01 502490.9 5258113.5 496.8 36.30 313.60 17.00 2.68 YES  
PS029 0 0.31500E+01 502499.3 5258115.5 496.8 36.30 313.60 17.00 2.68 YES  
PS030 0 0.31500E+01 502505.0 5258117.0 496.8 36.30 313.60 17.00 2.68 YES  
PS031 0 0.11400E+01 502398.0 5258188.0 496.8 35.40 301.30 23.18 1.52 YES  
PS032 0 0.11400E+01 502414.5 5258191.0 496.8 35.40 301.30 23.18 1.52 YES

Facility Name: Hibbing Taconite Company  
Permit Number: 13700061-003 01/15/10

PS033	0	0.11400E+01	502496.7	5258208.0	496.8	35.40	301.30	23.18	1.52	YES	
PS034	0	0.22400E+01	502392.1	5258195.0	496.8	35.70	294.70	18.48	1.07	YES	
PS035	0	0.13400E+01	502330.8	5258183.0	496.8	19.80	295.80	13.58	1.01	YES	
PS036	0	0.18100E+00	502324.8	5258236.5	489.2	22.90	291.30	18.11	0.30	YES	
PS037	0	0.23300E+00	502344.4	5258248.0	489.2	22.90	291.30	18.11	0.30	YES	
PS038	0	0.00000E+00	502383.4	5258245.5	489.2	21.60	280.20	0.01	0.76	YES	
PS039	0	0.67500E+00	502428.3	5258335.0	490.7	46.90	280.20	0.01	0.76	NO	
PS040	0	0.67500E+00	502448.6	5258348.5	490.7	38.40	280.20	0.01	0.76	NO	
*** POINT SOURCE DATA ***											
NUMBER		EMISSION RATE		BASE	STACK	STACK	STACK	STACK	BUILDING		
SOURCE		PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS
SCALAR VARY											
ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		
BY											
PS041	0	0.67500E+00	502423.8	5258340.5	490.7	33.80	305.20	0.01	3.44	NO	
PS042	0	0.00000E+00	502434.6	5258339.5	490.7	44.20	305.20	0.01	0.76	NO	
PS043	0	0.00000E+00	502444.4	5258352.5	490.7	33.80	305.20	0.01	3.44	NO	
PS044	0	0.44100E-02	502266.6	5258186.0	490.7	9.40	477.40	0.01	0.41	YES	
PS045	0	0.13900E-01	502400.6	5258112.0	496.8	5.30	755.20	0.01	0.18	YES	
PS046	0	0.16400E-01	502499.8	5258133.0	496.8	9.10	755.20	0.01	0.25	YES	
PS047	0	0.98300E-01	502458.8	5257879.0	512.1	9.10	291.30	0.01	0.61	YES	
PS048	0	0.52900E-01	502114.6	5257918.0	502.9	4.60	288.60	0.01	1.03	YES	
PS049	0	0.52900E-01	502074.4	5257905.5	502.9	9.10	288.60	0.01	1.03	YES	
PS050	0	0.52900E-01	502040.1	5257923.5	502.9	15.20	288.60	0.01	1.03	YES	
PS051	0	0.52900E-01	502055.1	5257872.5	502.9	15.20	288.60	0.01	1.03	YES	
PS052	0	0.12300E+00	502170.9	5257896.5	515.1	19.50	288.60	18.62	0.41	YES	
PS053	0	0.12300E+00	502192.6	5257900.5	515.1	19.50	288.60	19.48	0.40	YES	
PS054	0	0.13000E+00	502607.4	5258152.0	509.0	22.90	280.20	0.01	0.29	YES	
PS055	0	0.38900E+00	502608.9	5258147.5	509.0	2.10	280.20	0.01	1.22	YES	
INL_0003	0	0.49870E+02	536100.0	5267300.0	493.8	2.44	292.00	8.16	0.94	NO	
ETE_0009	0	0.20490E+02	533200.0	5258900.0	457.2	1.10	298.00	25.87	0.76	NO	
ETF_0013	0	0.10919E+03	533400.0	5254300.0	457.2	4.27	298.00	11.09	0.09	NO	
LTV_0037	0	0.64243E+03	564600.0	5271500.0	487.7	6.10	298.00	7.76	0.15	NO	
VPU_0039	0	0.42740E+02	534500.0	5263100.0	435.9	39.62	455.00	10.19	2.20	NO	
MPS_0042	0	0.47660E+02	563000.0	5264300.0	442.0	27.13	298.00	26.71	0.24	NO	
HPU_0043	0	0.49920E+02	505000.0	5252650.0	457.2	35.05	450.00	11.89	2.35	NO	
NAT_0045	0	0.25000E+01	495400.0	5251000.0	451.0	19.20	298.00	17.30	0.82	NO	
NAT_0046	0	0.25500E+01	495400.0	5251000.0	451.0	35.05	298.00	17.63	0.61	NO	
NAT_0047	0	0.16300E+01	495400.0	5251000.0	451.0	42.37	303.00	13.04	0.76	NO	
NAT_0048	0	0.41000E+00	495400.0	5251000.0	451.0	27.13	298.00	12.29	0.34	NO	
NAT_0049	0	0.22600E+01	495400.0	5251000.0	451.0	46.02	797.00	12.83	4.27	NO	
NAT_0050	0	0.66480E+02	495400.0	5251000.0	451.0	41.76	394.00	16.44	3.87	NO	
NAT_0051	0	0.80660E+02	495400.0	5251000.0	451.0	47.24	389.00	10.98	3.96	NO	
HWP_0053	0	0.11100E+02	523600.0	5300900.0	408.4	10.06	298.00	8.28	0.76	NO	
POT_0056	0	0.57200E+01	525600.0	5293600.0	408.4	33.53	342.00	6.73	1.31	NO	
USX_S027	0	0.15527E+03	528171.0	5268032.0	527.6	31.26	292.00	8.69	0.38	NO	
MPB_SV03	0	0.31801E+03	450600.0	5234100.0	394.1	213.36	353.00	15.59	8.84	NO	
*** AREA SOURCE DATA ***											
NUMBER		EMISSION RATE		COORD (SW CORNER)	BASE	RELEASE	X-DIM	Y-DIM	ORIENT.	INIT.	
SOURCE		PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	OF AREA	OF AREA	OF AREA	SZ
SCALAR VARY											
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.)	(METERS)	
BY											
MINE001	0	0.10000E-05	504044.6	5255706.5	457.2	3.05	1524.00	1371.60	0.00	0.00	
MINE002	0	0.72200E-06	501149.0	5254792.0	442.0	3.05	1066.80	609.60	0.00	0.00	
MINE003	0	0.36400E-06	499472.6	5253877.5	432.8	3.05	609.60	609.60	0.00	0.00	
MINE004	0	0.13700E-05	500387.0	5254258.5	457.2	3.05	1219.20	304.80	0.00	0.00	
PILE001	0	0.12800E-06	503130.2	5257535.0	518.2	3.05	2362.20	1219.20	0.00	0.00	
PILE002	0	0.14300E-06	500996.6	5256621.0	539.5	3.05	1219.20	914.40	0.00	0.00	
PILE003	0	0.27500E-08	500387.0	5256621.0	539.5	3.05	609.60	304.80	0.00	0.00	
PILE004	0	0.14300E-06	499320.2	5254792.0	487.7	3.05	1676.40	1219.20	0.00	0.00	
PILE005	0	0.19100E-06	505890.0	5255725.0	481.6	3.05	550.00	410.00	0.00	0.00	
ROADS	0	0.73700E-06	499931.2	5254646.5	442.0	3.05	4886.60	3076.50	0.00	0.00	
TDUMP	0	0.49600E-02	502236.1	5257671.0	524.3	3.05	29.00	12.20	-9.26	0.00	
ORELOAD	0	0.33200E-02	502240.9	5257641.5	524.3	0.00	29.00	12.20	-9.26	0.00	
FCS	0	0.14300E-05	502117.3	5257762.0	518.2	9.14	304.80	103.60	-9.26	0.00	
PS	0	0.36200E-04	502449.1	5257998.5	502.9	4.57	118.90	38.10	-9.26	0.00	
PSRECL	0	0.90000E-04	502357.3	5258225.0	490.7	4.57	41.10	41.10	0.00	0.00	
TAIL001	0	0.12500E-07	499794.2	5257007.0	475.5	0.00	4572.00	2590.80	-36.03	0.00	
TAIL002	0	0.12500E-07	499590.2	5260115.0	460.2	0.00	4392.00	1236.00	-36.03	0.00	
TAIL003	0	0.12500E-07	502944.2	5260451.0	460.2	0.00	1140.00	1740.00	-36.03	0.00	
TAIL004	0	0.11700E-06	501198.2	5257631.0	475.5	0.00	1272.00	1026.00	-39.59	0.00	
TAIL005	0	0.11700E-06	501402.2	5259635.0	475.5	0.00	195.00	448.00	0.00	0.00	
TAIL006	0	0.11700E-06	499102.4	5258615.0	475.5	0.00	304.80	304.80	0.00	0.00	
TAIL007	0	0.11700E-06	499102.4	5257691.0	475.5	0.00	304.80	304.80	0.00	0.00	
ALL	PS001	PS002	PS003	PS004	PS005	PS006	PS007	PS008	PS009	PS010	
PS011	PS012										
	PS013	PS014	PS015	PS016	PS017	PS018	PS019	PS020	PS021	PS022	
PS023	PS024										
	PS025	PS026	PS027	PS028	PS029	PS030	PS031	PS032	PS033	PS034	
PS035	PS036										
	PS037	PS038	PS039	PS040	PS041	PS042	PS043	PS044	PS045	PS046	
PS047	PS048										

Facility Name: Hibbing Taconite Company  
 Permit Number: 13700061-003 01/15/10

MINE004 , PS049 , PS050 , PS051 , PS052 , PS053 , PS054 , PS055 , MINE001 , MINE002 , MINE003 ,  
 PILE001 ,  
 PILE002 , PILE003 , PILE004 , PILE005 , ROADS , TDUMP , ORELOAD , FCS , PS , PSRECL ,  
 TAIL001 , TAIL002 ,  
 TAIL003 , TAIL004 , TAIL005 , TAIL006 , TAIL007 , INL\_0003 , ETE\_0009 , ETF\_0013 , LTV\_0037 , VPU\_0039 ,  
 MPS\_0042 , HPU\_0043 ,  
 NAT\_0045 , NAT\_0046 , NAT\_0047 , NAT\_0048 , NAT\_0049 , NAT\_0050 , NAT\_0051 , HWP\_0053 , POT\_0056 , USX\_S027 ,  
 MPB\_SV03 ,  
 HIBTAC , PS001 , PS002 , PS003 , PS004 , PS005 , PS006 , PS007 , PS008 , PS009 , PS010 ,  
 PS011 , PS012 ,  
 PS013 , PS014 , PS015 , PS016 , PS017 , PS018 , PS019 , PS020 , PS021 , PS022 ,  
 PS023 , PS024 ,  
 PS025 , PS026 , PS027 , PS028 , PS029 , PS030 , PS031 , PS032 , PS033 , PS034 ,  
 PS035 , PS036 ,  
 PS037 , PS038 , PS039 , PS040 , PS041 , PS042 , PS043 , PS044 , PS045 , PS046 ,  
 PS047 , PS048 ,  
 PS049 , PS050 , PS051 , PS052 , PS053 , PS054 , PS055 , MINE001 , MINE002 , MINE003 ,  
 MINE004 , PILE001 ,  
 PILE002 , PILE003 , PILE004 , PILE005 , ROADS , TDUMP , ORELOAD , FCS , PS , PSRECL ,  
 TAIL001 , TAIL002 ,  
 TAIL003 , TAIL004 , TAIL005 , TAIL006 , TAIL007 ,

\*\*\* UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES \*\*\*  
 (METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

SURFACE STATION NO.: 94931

UPPER AIR STATION NO.: 14926

\*\*\* ISCST3 - VERSION 97363 \*\*\* \*\*\* 1972 SO2 Modeling Input File  
\*\*\* 03/20/98

\*\*\* Hibbing Taconite Facility

\*\*\*

17:58:39  
D:\HTCAPR98\HTCSO72.LST

PAGE 1

\*MODELOPTs: CONC

RURAL ELEV DFAULT  
\*\*\* MODEL SETUP OPTIONS SUMMARY \*\*\*

-----  
\*Intermediate Terrain Processing is Selected  
\*Model Is Setup For Calculation of Average CONCentration Values.  
-- SCAVENGING/DEPOSITION LOGIC --  
\*Model Uses NO DRY DEPLETION. DDPLETE = F  
\*Model Uses NO WET DEPLETION. WDPLETE = F  
\*NO WET SCAVENGING Data Provided.  
\*Model Does NOT Use GRIDDED TERRAIN Data for Depletion Calculations  
\*Model Uses RURAL Dispersion.  
\*Model Uses Regulatory DEFAULT Options:  
1. Final Plume Rise.  
2. Stack-tip Downwash.  
3. Buoyancy-induced Dispersion.  
4. Use Calms Processing Routine.  
5. Not Use Missing Data Processing Routine.  
6. Default Wind Profile Exponents.  
7. Default Vertical Potential Temperature Gradients.  
8. "Upper Bound" Values for Supersquat Buildings.  
9. No Exponential Decay for RURAL Mode

\*Model Accepts Receptors on ELEV Terrain.  
\*Model Assumes No FLAGPOLE Receptor Heights.  
\*Model Calculates 3 Short Term Average(s) of: 1-HR 3-HR 24-HR  
and Calculates PERIOD Averages  
\*This Run Includes: 48 Source(s); 2 Source Group(s); and 644 Receptor(s)  
\*The Model Assumes A Pollutant Type of: SO2  
\*Model Set To Continue RUNNING After the Setup Testing.  
\*Output Options Selected:

Model Outputs Tables of PERIOD Averages by Receptor  
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)  
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

\*NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours  
m for Missing Hours  
b for Both Calm and Missing Hours  
\*Misc. Inputs: Anem. Hgt. (m) = 8.50 ; Decay Coef. = 0.0000 ; Rot. Angle = 0.0  
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =  
0.10000E+07

Output Units = MICROGRAMS/M\*\*3

\*Input Runstream File: htcs072.dat ; \*\*Output Print File: htcs072.lst

\*File Created for Event Model: C:\MODELS\HIBTAC\HTCSO72.EVT

\*\*\* POINT SOURCE DATA \*\*\*  
NUMBER EMISSION RATE  
BASE STACK STACK STACK STACK BUILDING  
EMISSION RATE  
SOURCE PART. (GRAMS/SEC) X Y ELEV. HEIGHT TEMP. EXIT VEL. DIAMETER EXISTS  
SCALAR VARY  
ID CATS. (METERS) (METERS) (METERS) (METERS) (DEG.K) (M/SEC) (METERS)  
BY  
PS019 0 0.74300E+01 502381.1 5258096.5 496.8 36.30 313.60 17.00 2.68 YES  
PS020 0 0.74300E+01 502391.3 5258097.5 496.8 36.30 313.60 17.00 2.68 YES  
PS021 0 0.74300E+01 502398.9 5258098.5 496.8 36.30 313.60 17.00 2.68 YES  
PS022 0 0.74300E+01 502407.3 5258100.5 496.8 36.30 313.60 17.00 2.68 YES  
PS023 0 0.74300E+01 502439.2 5258102.5 496.8 36.30 313.60 17.00 2.68 YES  
PS024 0 0.74300E+01 502448.0 5258105.0 496.8 36.30 313.60 17.00 2.68 YES  
PS025 0 0.74300E+01 502458.1 5258106.5 496.8 36.30 313.60 17.00 2.68 YES  
PS026 0 0.74300E+01 502468.1 5258109.0 496.8 36.30 313.60 17.00 2.68 YES  
PS027 0 0.74300E+01 502482.2 5258113.5 496.8 36.30 313.60 17.00 2.68 YES  
PS028 0 0.74300E+01 502490.9 5258113.5 496.8 36.30 313.60 17.00 2.68 YES  
PS029 0 0.74300E+01 502499.3 5258115.5 496.8 36.30 313.60 17.00 2.68 YES  
PS030 0 0.74300E+01 502505.0 5258117.0 496.8 36.30 313.60 17.00 2.68 YES  
PS044 0 0.40600E+00 502266.6 5258186.0 490.7 9.40 477.40 0.01 0.41 YES  
PS045 0 0.16400E+00 502400.6 5258112.0 496.8 5.30 755.20 0.01 0.18 YES  
PS046 0 0.18800E+00 502499.8 5258133.0 496.8 9.10 755.20 0.01 0.25 YES  
USX\_L003 0 0.23330E+02 528075.0 5268083.0 517.6 35.36 386.00 25.00 3.05 NO  
USX\_L4&5 0 0.65580E+02 528145.0 5268112.0 518.0 42.25 324.00 14.80 4.57 NO  
USX\_L6&7 0 0.98360E+02 528398.0 5268062.0 518.8 42.67 316.00 10.20 4.88 NO  
USXSTEP1 0 0.68200E+01 527594.0 5267954.0 511.5 20.50 489.00 10.30 1.37 NO  
USXSTEP2 0 0.82000E+01 527604.0 5267957.0 511.5 20.50 489.00 12.20 1.37 NO  
USXSTEP3 0 0.20000E-01 527621.0 5267960.0 511.5 20.91 564.00 6.70 1.37 NO  
USX\_\_BLR 0 0.32800E+01 527678.0 5266783.0 492.9 17.93 561.00 5.80 0.76 NO  
INLANDST 0 0.13620E+03 536100.0 5267300.0 493.8 41.45 322.00 26.18 2.06 NO  
ETE\_001 0 0.48600E+01 533200.0 5258900.0 457.2 15.85 422.00 1.83 0.98 NO  
ETE\_002 0 0.41100E+01 533200.0 5258900.0 457.2 24.99 422.00 4.44 0.82 NO  
ETE\_003 0 0.42300E+01 533200.0 5258900.0 457.2 25.60 422.00 2.31 0.98 NO  
ETF\_001 0 0.50000E+00 533400.0 5254300.0 457.2 4.27 422.00 21.56 0.09 NO  
ETF\_002 0 0.12120E+02 533400.0 5254300.0 457.2 7.32 422.00 7.16 0.09 NO  
ETF\_003 0 0.87270E+02 533400.0 5254300.0 457.2 42.67 327.00 23.88 0.09 NO  
ETF\_004 0 0.38338E+03 533400.0 5254300.0 457.2 46.63 323.00 14.07 0.09 NO

Facility Name: Hibbing Taconite Company  
 Permit Number: 13700061-003 01/15/10

HIBTAC	0	0.18917E+03	502200.0	5258200.0	502.9	36.27	317.00	14.82	2.68	NO	
LTV_001	0	0.65580E+02	564600.0	5271500.0	487.7	40.23	519.00	26.69	1.07	NO	
LTV_002	0	0.13620E+03	564600.0	5271500.0	487.7	39.93	393.00	19.85	1.43	NO	
LTV_003	0	0.45400E+02	564600.0	5271500.0	487.7	51.21	325.00	12.85	1.52	NO	
LTV_004	0	0.90800E+02	564600.0	5271500.0	487.7	48.77	325.00	12.85	1.52	NO	
VPU_001	0	0.76700E+02	534500.0	5263100.0	435.9	39.62	464.00	18.97	1.52	NO	
VPU_002	0	0.11700E+03	534500.0	5263100.0	435.9	39.62	455.00	10.19	2.20	NO	
VPU_003	0	0.12090E+03	534500.0	5263100.0	435.9	45.72	422.00	29.13	1.52	NO	
MPS	0	0.26480E+03	563000.0	5264300.0	442.0	91.44	331.00	28.95	3.20	NO	
HPU_001	0	0.82360E+02	505000.0	5252650.0	457.2	35.05	450.00	11.89	2.35	NO	
*** POINT SOURCE DATA ***											
NUMBER		EMISSION RATE		BASE		STACK	STACK	STACK	STACK	BUILDING	
EMISSION RATE	SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS
SCALAR VARY	ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		
BY											
HPU_002	0	0.49410E+02	505000.0	5252650.0	457.2	37.49	450.00	16.96	2.29	NO	
NSTEEL_1	0	0.18920E+02	495400.0	5251000.0	451.0	41.76	394.00	16.44	3.87	NO	
NSTEEL_2	0	0.42370E+02	495400.0	5251000.0	451.0	47.24	389.00	10.98	3.96	NO	
HWP_001	0	0.40000E-01	523600.0	5300900.0	408.4	20.12	298.00	1.78	1.01	NO	
HWP_002	0	0.50000E-01	523600.0	5300900.0	408.4	21.95	305.00	17.32	0.91	NO	
POTLATCH	0	0.14000E+00	525600.0	5293600.0	408.4	33.53	342.00	6.73	1.31	NO	
MPB_SV03	0	0.16909E+04	450600.0	5234100.0	394.1	213.36	353.00	15.59	8.84	NO	
MPB_SV04	0	0.21244E+03	450700.0	5234400.0	394.4	182.88	343.00	35.85	6.10	NO	
ALL	PS019	, PS020	, PS021	, PS022	, PS023	, PS024	, PS025	, PS026	, PS027	, PS028	,
PS029	, PS030										
	PS044	, PS045	, PS046	, USX_L003	, USX_L4&5	, USX_L6&7	, USXSTEP1	, USXSTEP2	, USXSTEP3	, USX__BLR	,
INLANDST	ETE_001										
	ETE_002	, ETE_003	, ETF_001	, ETF_002	, ETF_003	, ETF_004	, HIBTAC	, LTV_001	, LTV_002	, LTV_003	,
LTV_004	, VPU_001										
	VPU_002	, VPU_003	, MPS	, HPU_001	, HPU_002	, NSTEEL_1	, NSTEEL_2	, HWP_001	, HWP_002	, POTLATCH	,
MPB_SV03	MPB_SV04										
HIBTAC	PS019	, PS020	, PS021	, PS022	, PS023	, PS024	, PS025	, PS026	, PS027	, PS028	,
PS029	, PS030										
	PS044	, PS045	, PS046								
*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***											
(METERS/SEC)											
1.54, 3.09, 5.14, 8.23, 10.80,											

SURFACE STATION NO.: 94931

UPPER AIR STATION NO.: 14926

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 13700061-003**

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

**1. General Information**

**1.1 Applicant and Stationary Source Location:**

Applicant/Address	Stationary Source/Address (SIC Code: 1011)
Hibbing Taconite Company PO Box 589 Hibbing, MN 55746	Highway 5 N Hibbing St. Louis County
Contact: Mr. Andrew S. McDowell, Environmental Manager Phone: 218-262-5970	

**1.2 Description of the Permit Action**

The permit action renews the Part 70 operating permit for Hibbing Taconite Company (HTC) and authorizes a number of physical changes to its operations.

The facility is a major source under the Part 70 regulations and also under the Prevention of Significant Deterioration (PSD) regulation. If emissions from the projects exceeded the PSD significance levels, HTC would be required to conduct an analysis for Best Available Control Technology (BACT) and perform other actions required under PSD. However, HTC proposes adding new equipment, and the emissions from this addition will not exceed PSD significance levels. Because of this, the facility is not subject to BACT and other PSD requirements for this permit action.

The company included several non-road engines in its permit application. By definition, the non-road units are not included as emission units in this stationary source operating permit or in the PSD determination. (The emissions from the non-road units may be included in modeling to demonstrate compliance with ambient air quality standards or to determine impacts on Air Quality Related Values in Class I Areas. Minnesota's Class I Areas are the Boundary Waters Canoe Area Wilderness and Voyageurs National Park.)

### **1.3 Facility Description**

HTC, an unincorporated joint venture, is the owner and operator of a taconite (magnetite) ore mining and beneficiation facility located in Hibbing, Minnesota. Cliffs Mining Company is the managing agent.

HTC's mine and beneficiation facility (all plant buildings) are located in St. Louis County, an area designated attainment for all criteria pollutants. The existing facility is classified as a major emission source with respect to the federal PSD program. The facility is also a major source of hazardous air pollutants (HAPs) because potential emissions of HAPs exceed the major source thresholds of 10 tons per year (tpy) for any individual HAP and 25 tpy of total HAPs.

The beneficiation plant is situated in the approximate center of HTC's property, with the active mine extending from three miles to the southeast to six miles to the southwest, and the tailing basin located to the north. The beneficiation plant was constructed in two phases. Phase I construction began in 1974, with operations beginning in 1976. Phase I consists of one crusher, six autogenous mill lines, two stages of magnetic separation – rougher and finisher, two Dravo-Lurgi straight grate indurating furnaces, and associated processing and material handling equipment. Phase II construction began in 1976, with operations beginning in 1979. Phase II consists of one crusher, three autogenous grinding mill lines, two stages of magnetic separation, one Dravo-Lurgi straight grate indurating furnace, and associated processing and material handling equipment.

The three pellet indurating furnaces are functionally equivalent, each one producing, on average, the same yield. HTC produced in excess of 8.6 million dry long tons (dlt) – in 1988, with capabilities of producing up to 9 million dlt annually. Steel demand drives the level of HTC's annual pellet production. By convention, HTC reports long tons (1 long ton = 2240 pounds) of production. Because the Minnesota Pollution Control Agency (MPCA) uses short tons, the long tons are multiplied by a factor of 1.12 and reported as short tons for air quality permitting purposes.

To produce 8.0 million dlt of pellets, approximately 32 million wlt (wet long tons) of taconite ore must be processed. The current weight recovery (percentage of concentrate recovered to taconite ore) is in the range of 25 percent. Stripping (including the overburden, the rock, and the low-grade taconite that cannot be economically processed) must be performed prior to hauling the taconite ore. "All-material" includes the total taconite ore removed and stripping tons. During the period (1994-1998), HTC averaged nearly 50 million long tons of all material per year.

HTC started operation in 1976 having the flexibility to use natural gas or fuel oil (all grades). All three furnaces started operation with No. 6 fuel oil (Bunker C) as the primary fuel and were then switched over to natural gas as the primary fuel during 1981. In the recent past, the facility evaluated other fuels including wood and oat hulls. To date, these alternative fuels have not proven to be viable options for the current indurating process.

The major steps in taconite pellet production include taconite ore mining, crushing, grinding, concentrating, agglomerating, and indurating. The larger sources of air emissions at HTC are from the mining activities and indurating furnace operations, with lesser amounts from other

processing operations and fugitive dust sources, including haul roads and the tailings basin. The mining activities and materials handling operations generate particulate emissions. Wet scrubbers are the primary means of controlling these emissions, although baghouses are used on some smaller emission units.

The indurating furnaces emit particulate matter and combustion pollutants. Particulate emissions are controlled with wet scrubbers, which also reduce emissions of sulfur dioxide. Because the construction of the facility predates the PSD program, the furnaces have no add-on controls in place to limit emissions of nitrogen oxide or carbon monoxide.

#### **1.4 Description of any Changes Allowed with this Permit Issuance**

Through this permitting action, HTC proposes several changes to existing emissions units operated at the facility. It also proposes to install additional emission units.

The permit reflects the permit application and authorizes the following physical changes:

- Replacement of the pilot burners on the pellet furnaces.
- Shutdown of the Phase I and Phase II emergency generators (EU031/SV041 and EU032/SV042). The fuel tanks that serve these generators have already been removed.
- Replacement/modification of the lower burners on each of the three pellet furnaces. The replacement/modified burners have the same combustion capacity as the existing lower burners (80 MMBtu/hr). However, the replacement/modified burners are more efficient and are expected to be operated at a lower average combustion rate than the existing burners.
- Removal of an existing 1300 kilowatt (kW) diesel generator.
- Installation of a new 1825 kW generator. HTC will replace the 1300 kW (roughly 2275 hp) with the new generator (with ~3200 hp). HTC will use the new generator to move electric rope shovels, electric power drills, and the electrically powered tailing basin dragline around the mine.
- Installation of new portable heaters.

The permit also makes the following changes that are not related to physical changes at the facility:

- Removes differential pressure requirements for the Demist Panels.
- Incorporates requirements of 40 CFR pt. 63, subpart RRRRR (the National Emission Standard for Hazardous Air Pollutants: Taconite Ore Processing). To accommodate this NESHAP, the MPCA created several new groups. The MPCA placed parametric monitoring limits and performance testing requirements at the Control Equipment (CE) level.
- Incorporates provisions resulting from a Compliance Assurance Monitoring plan submitted by HTC in compliance with 40 CFR pt. 64.
- Revises differential pressure limits and the water flow rates for several scrubbers to reflect updated testing for demonstrating compliance with the Taconite NESHAP limits.



- Updates testing frequency requirements based on testing performed during the previous permit term.
- Updates of the list of insignificant activities.
- Updates data for stack/vents, emission units, data acquisition, and continuous monitoring.
- Updates potential to emit information.
- Removes completed requirements (such as the submittal of the fugitive dust control plan) and eliminates requirements for removed or retired equipment;
- Adds NAAQS compliance requirement.
- Updates Compliance Certification language.
- Updates requirements for making changes that might be subject to New Source Review (reflects rule changes).
- Adds language referencing Permit Appendices.

**1.5 Description of All Amendments Issued Since the Issuance of the Last Total Facility Permit**

<b>Permit Number and Issuance Date</b>	<b>Action Authorized</b>
13700061-002 February 23, 2006	Changes to parametric ranges for pollution control equipment; change in averaging time to conform with Taconite NESHAP (40 CFR 63 subpart RRRRR); change to furnace production capacity; removal of four units; and extensions to stack testing deadlines.

## 1.6 Facility Emissions:

**Table 1. Total Facility Potential to Emit Summary (tpy)**

ID#	Emission Unit Description	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	Pb
GP001	Crushing	17	17	17					
GP002	Concentrating	32	32	32					
GP003	Furnaces 1 – 3	743	743	743	1628	6534	179	50	0.19
GP004	Pelletizing – Scrubbers	128	128	128					
GP005	Pelletizing – Baghouses	129	134	134					
EU036	Paint Booth	1	1	1				2	
	Fugitive – Plant	376	180	180					
	Fugitive – Mine	1348	708	708					
	<b>TOTAL</b>	<b>2775</b>	<b>1943</b>	<b>1943</b>	<b>1628</b>	<b>6534</b>	<b>179</b>	<b>52</b>	<b>0.19</b>
	Total Facility Actual Emissions (2006)	2373	1538	not reported	402	5550	119	45	0.17

**Table 2. Summary of Changes from the Modification (tpy)**

	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC	Lead
A) Projected actual emissions from the furnace	14.2	14.2	14.2	627	6541	180	50	0.17
B) Baseline emissions from the furnaces	10.6	10.6	10.6	627	6557	138	50	0.17
C) Net change in emissions (A-B)	3.6	3.6	3.6	0	-16	42	0	0
D) PSD significance threshold	25	15	10	40	40	100	40	0.6
Major modification (C > D)?	No	No	No	No	No	No	No	No

The permit does not authorize activities that will lead to an increase in mercury emissions.

**Table 3. Facility Classification**

<b>Classification</b>	<b>Major/Affected Source</b>	<b>Synthetic Minor</b>	<b>Minor</b>
PSD	X		
Part 70 Permit Program	X		
Part 63 NESHAP	X		

### **1.7 Changes to Permit**

In addition to the changes proposed in the construction application dated February 29, 2008, a number of administrative changes were made to the permit during reissuance. This includes:

- updating the permit to reflect current MPCA templates and standard citation formatting; and
- incorporating the conditions for the Taconite NESHAP, including the Part 63 General Provisions.

## **2. Regulatory and/or Statutory Basis**

### New Source Review

With potential and actual emissions exceeding 100 ton per year, this taconite facility is an existing major source under New Source Review regulations found at 40 CFR § 52.21.

Restrictions on fuels (natural gas and fuel oil) for the indurating furnaces limit the emission increases from the project below the significance levels for the PSD program.

### Part 70 Permit Program

Because its potential and actual emissions of criteria pollutants exceed 100 ton per year and potential and actual emissions of HAPs exceed 25 tons per year, the facility is a major source under the Part 70 permit program

### National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a major source under the National Emission Standards for Hazardous Air Pollutants (NEHSAPs, 40 CFR pt. 63). Much of the facility – the emission units, control equipment, stack/vents, and fugitive sources of GP008 – is subject to the National Emissions Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing (subpart RRRRR).

### Compliance Assurance Monitoring (CAM)

CAM applies to a pollutant-specific emission unit at a major source and is used as a mechanism to monitor for compliance of an applicable rule or regulation. In this case CAM is required to assure compliance with the particulate matter limits established in Minn. R. 7011.0715 or Minn. R. 7011.0610 depending on the emission unit.

There are three criteria that must be met in order for an emission unit to be subject to CAM. For a specific pollutant, the unit; (1) must be subject to an emission limitation or standard; (2) have an uncontrolled (i.e., prior to control) potential-to-emit that exceeds the major source threshold for that specific pollutant; and (3) have add-on controls to achieve compliance with the emission limitation or standard. The CAM regulation further separates emission units by *pollutant-specific emission units* (PSEUs), into *large PSEUs* (units with controlled pollutant-specific emissions that exceed the major source threshold) and *other PSEUs* (units with controlled pollutant-specific emissions that do not exceed the major source threshold). Since this permit action includes a reissuance, HTC has submitted a CAM plan for both *large* and *other PSEUs* that met the above criteria. The plan submitted by HTC can be found in Attachment 8 and a summary of applicable emission units and the basis for there inclusion is displayed in Table 4.

**Table 4. Compliance Assurance Monitoring Applicability**

<b>Emission unit</b>	<b>Pollutant</b>	<b>Applicable Regulation</b>	<b>Major Source Threshold (tpy)</b>	<b>Uncontrolled PTE (tpy)</b>	<b>Limited PTE (tpy)</b>
EU 001, Phase I Apron Feeder	PM	[1], [3]	100	157.7	4.2
EU 002, Phase II Apron Feeder	PM	[1], [3]	100	157.7	4.2
EU 003, Phase I Primary Ore Conveyor - Tail	PM	[1], [3]	100	157.7	4.2
EU 004 Phase II Primary Ore Conveyor - Tail	PM	[1], [3]	100	157.7	4.2
EU 005, Line No 1 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 006, Line No 2 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 007, Line No 3 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 008, Line No 4 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6

EU 009, Line No 5 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 010, Line No 6 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 011, Line No 7 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 012, Line No 8 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 013, Line No 9 Mill Feed Conveyor	PM	[1], [3]	100	135.2	3.6
EU 018, Phase I Hearth Layer Bin/Layer Feed	PM	[1], [3]	100	203.6	19.2
EU 019, Phase II Hearth Layer Bin/Layer Feed	PM	[1], [3]	100	168.9	9.3
EU 020, Pellet Indurating Furnace Line No 1	PM	[2], [3]	100	567.7	248
EU 021, Pellet Indurating Furnace Line No 2	PM	[2], [3]	100	567.7	248
EU 022, Pellet Indurating Furnace Line No 3	PM	[2], [3]	100	567.7	248
EU 023, Pellet Machine Discharge Line No 1	PM	[1], [3]	100	207.0	27.9
EU 024, Pellet Machine Discharge Line No 2	PM	[1], [3]	100	207.0	27.9
EU 025, Pellet Machine Discharge Line No 3	PM	[1], [3]	100	207.0	27.9
EU 026, Pellet Hearth Layer Screening	PM	[1], [3]	100	203.6	9.0
EU 027, Pellet Transfer House	PM	[1], [3]	100	236.5	6.3

[1] Minn. R. 7011.0715 “Standards of Performance for Post-1969 Industrial Process Equipment

[2] Minn. R. 7011.0610 “Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment

[3] 40 CFR pt. 63, subp. RRRRR “NESHAP: Taconite Iron Ore Processing”

## Minnesota State Rules

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

- Minn. R. 7011.0050 General Provisions of Federal New Source Performance Standards Incorporated by Reference (incorporation of 40 CFR 60 subpart A by reference)
- Minn. R. 7011.0610 Standards of Performance for Direct Heating Fossil-Fuel-Burning Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.7000 General Provisions of Federal National Emissions Standards for Hazardous Air Pollutants Source Categories Incorporated by Reference (incorporation of 40 CFR 63 subpart A by reference)
- Minn. R. 7011.8030 Taconite Iron Ore Processing (incorporation of 40 CFR 63 subpart RRRRR by reference)

**Table 5. Regulatory Overview of Facility**

EU, GP, or SV	Applicable Regulations	Comments:
GP001	40 CFR pt. 63, subp. RRRRR	These metallic ore crushing operations are subject to the Taconite NESHAP and are considered existing affected units; on which construction or reconstruction occurred prior to December 18, 2002. These units are controlled with venturi scrubbers, they are subject to the scrubber provisions of the NESHAP.
	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
	40 CFR §64.5(b)	Each emission unit in this group is an other PSEU. The CAM threshold for other PSEUs was exceeded for PM from each emission unit in this group.
GP002	40 CFR pt. 63, subp. RRRRR	These metallic ore concentrating (handling) operations are subject to the Taconite NESHAP and are considered existing affected units; on which construction or reconstruction occurred prior to December 18, 2002. These units are controlled with wet scrubbers, they are subject to the scrubber provisions of the NESHAP.
	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
	40 CFR §64.5(b)	Each emission unit in this group is an other PSEU. The CAM threshold for other PSEUs was exceeded for PM from each emission unit in this group.
GP003	40 CFR § 52.21	The amount of natural gas that the three indurating furnaces, combined, are allowed to consume over a 12-month period is limited to avoid a major modification classification under PSD for emissions of CO.

EU, GP, or SV	Applicable Regulations	Comments:
	40 CFR pt. 63, subp. RRRRR	These straight grate indurating furnaces processing magnetite are considered existing affected units under the NESHAP; on which construction or reconstruction occurred prior to December 18, 2002. These units are controlled with venturi scrubbers, they are subject to the scrubber provisions of the NESHAP.
	Minn. R. 7011.0610	Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
	40 CFR §64.5(a)	Each emission unit in this group is a large PSEU. The CAM threshold for large PSEUs was exceeded for PM from each emission unit in this group.
GP004	40 CFR pt. 63, subp. RRRRR	These metallic ore handling and finished pellet handling operations are considered existing affected units under the NESHAP; on which construction or reconstruction occurred prior to December 18, 2002. These units are controlled with wet scrubbers, they are subject to the scrubber provisions of the NESHAP.
	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
	40 CFR §64.5(b)	Each emission unit in this group is an other PSEU. The CAM threshold for other PSEUs was exceeded for PM from each emission unit in this group.
GP005	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
GP006	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines
	Minn. R. 7007.0800, subp. 2	This limitation on fuels that can be combusted reflects the application.
GP008	40 CFR pt. 63, subp. A	These emission units and fugitive emission sources are subject to the Taconite NESHAP, so they are also subject to the NESHAP General Provisions (40 CFR pt. 63, subp. A).
GP009	40 CFR pt. 63, subp. RRRRR	These emissions units (point sources) are subject to the Taconite NESHAP. These are the requirements to which all such units are subject.
GP010	40 CFR pt. 63, subp. RRRRR	These ore crushing and handling sources are subject to the Taconite NESHAP; in accordance with 40 CFR pt. 63.9634(b), their emissions may be averaged to determine compliance with parametric limits.
GP011	40 CFR pt. 63, subp. RRRRR	These finished pellet handling sources are subject to the Taconite NESHAP; in accordance with 40 CFR pt. 63.9634(b), their emissions may be averaged to determine compliance with parametric limits.
GP013	40 CFR pt. 63, subp. RRRRR	These fugitive sources are subject to the Taconite NESHAP. These are the requirements to which all such sources are subject.
GP014	40 CFR pt. 63, subp. RRRRR	These wet scrubbers control the emissions from units subject to the Taconite NESHAP and are subject to the wet scrubber requirements of that regulation.

EU, GP, or SV	Applicable Regulations	Comments:
EU036	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment
CE001 – CE013; CE018 – CE021; CE022 – CE025; CE027 – CE030; CE032 – CE035; CE037 – CE041	40 CFR pt. 63, subp. RRRRR	These wet scrubbers and venturi scrubbers are needed for the units subject to the Taconite NESHAP and Minnesota Rules to comply with their emission limits. Parametric limits are established to ensure ongoing compliance with the limits in the Taconite NESHAP and Minnesota Rules.

### 3. Technical Information

#### 3.1 Calculations of the Facility Emissions

HTC is a major stationary source under both Part 70 and New Source Review. Facilities are subject to the operating permit requirements of 40 CFR Part 70 if the emissions of any regulated pollutant exceed 100 tons per year (tpy). [Table 1 to this TSD summarizes the PTE of the facility]

##### *Combustion emissions*

There are several combustion units at HTC's facility.

*Indurating furnace.* Emissions from of combustion pollutants (CO, NO<sub>x</sub>, SO<sub>2</sub>, and VOC) at the indurating furnaces from natural gas use were calculated using stack test results and external combustion emission factors from AP-42, chapter 1.4. (Particulate emissions are addressed in the following section.)

Emissions of NO<sub>x</sub> are limited by natural gas usage, so the potential NO<sub>x</sub> emissions from the indurating furnaces use an emission factor from May 2007 stack tests and the natural gas limitation in the permit. Emissions of SO<sub>2</sub> are the sum of emissions primarily from the sulfur released from the ore (determined from stack testing) plus the potential emissions from the combustion of fuel oil in the indurating furnaces. CO emissions are calculated using the maximum allowable natural gas use and emission factors derived from stack tests performed in June 2005. VOC emissions are based on the same natural gas limit and the average of emission factors from stack tests performed in June 2005.

##### *Particulate emissions from MACT sources*

Indurating furnaces, crushers, and concentrators are subject to the Taconite NESHAP (or MACT) and must meet the grain loading standards of 0.01 gr/dscf for the furnaces and 0.008 gr/dscf for the ore handling equipment. These sources are controlled with wet scrubbers or Venturi scrubbers, so their uncontrolled emissions easily exceed the limits in the Taconite NESHAP.



For particulate matter, the potential to emit from these sources is the product of their air flow rates and the emission limits. It was assumed that the amount of PM was equal to the amount of PM<sub>10</sub> from these units.

### ***Emissions from non-MACT sources***

Particulate emissions at the bentonite day bins are based on actual maximum throughputs, results from stack testing at these units, and a “safety factor” of two to account for potential increases in throughput. Particulate emissions from the paint booth were calculated in the same way.

The emissions from the bentonite storage silos are based on the maximum actual material throughput and an emission factor from AP-42 (Table 11.23-3).

Paint booth particulate emissions are based on a material balance using the maximum actual production and a safety factor of two. Paint booth emissions of VOC are based on a material balance and actual production.

### ***Fugitive emissions***

The fugitive emissions calculations rely on AP-42 emission factors from chapters 11.19, 11.23, and 13.2 as well as the highest throughputs observed at the facility. This includes emissions associated with haul roads as well as material handling. Tailing basin emission were calculated based on the August 19, 1997 MPCA memorandum from Hongming Jiang to Dennis Becker.

## **3.2 Calculations of the Emissions Increase for the Modification**

HTC is a major stationary source under both Part 70 and New Source Review.

### **NSR applicability**

The area surrounding HTC attains the National Ambient Air Quality Standards for all criteria pollutants, so the PSD program may apply if triggered (instead of Nonattainment Area New Source Review). HTC estimated emissions from a replacement/modified unit (the 80 MMBtu/hr Lower Burners on each indurating furnace).

The actual to projected actual test was used to calculate emission changes for the project. Projected actual emissions from furnaces after the modification are summarized in Table 2.

Detailed calculations associated with the determination can be found in Attachment 2.

Baseline emissions and projected actual emissions of CO, NO<sub>x</sub>, and VOCs from the indurating furnaces are estimated using HTC’s emission inventory. Emissions of SO<sub>2</sub> are based on HTC’s emission inventory and the estimated SO<sub>2</sub> emissions from natural gas consumption (using AP-42 emission factors). Baseline and projected actual emissions of NO<sub>x</sub> use the results of the May 2007 performance test. Particulate emissions (PM, PM<sub>10</sub>) are estimated using AP-42, Chapter 1.4. (For this analysis, emissions of PM<sub>2.5</sub> are assumed to be equivalent to emissions of PM<sub>10</sub>.) To limit NO<sub>x</sub> emissions, a limitation caps fuel use at 3,810,000 MMBtu per year. (This is a Title I Condition in the permit for GP003, the indurating furnaces.)

If the emissions increases from the new project exceeded the significance levels in the PSD rule, HTC would need to conduct a PSD analysis on the pollutant that exceeded the threshold. However, the project does not trigger PSD review.

### **3.3 Periodic Monitoring**

In accordance with the Clean Air Act, it is the responsibility of the owner or operator of a facility to have sufficient knowledge of the facility to certify that the facility is in compliance with all applicable requirements.

In evaluating the monitoring included in the permit, the MPCA considers the following:

- The likelihood of violating the applicable requirements;
- Whether add-on controls are necessary to meet the emission limits;
- The variability of emissions over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic feasibility of possible periodic monitoring methods; and
- The kind of monitoring found on similar units elsewhere.

Table 7 summarizes the periodic monitoring requirements for those emission units for which the monitoring required by the applicable requirement is nonexistent or inadequate.

**Table 7. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
GP001 (Apron feeders, ore conveyors: EU001 – EU004; CE001 – CE004; SV001 – SV003)	PM: $\leq 0.30$ gr/dscf, each unit (Minn. R. 7011.0715)  Opacity: $\leq 20$ % (Minn. R. 7011.0715)	One stack test during the permit term for one emission unit in the group on a rotating basis.	Ongoing compliance with the IPER limits will be demonstrated by compliance with the minimum pressure drop and water flow rates on a 24-hour block (daily) average.  Based on historical stack testing results, one stack test every five years is needed for demonstrating compliance with the IPER.
GP002 (Ore feed conveyors: EU005 – EU013; CE005 – CE013; SV004 – SV012)	PM: $\leq 0.30$ gr/dscf, each unit (Minn. R. 7011.0715)  Opacity: $\leq 20$ % (Minn. R. 7011.0715)	One stack test during the permit term on two emission units in the group on a rotating basis.	Ongoing compliance with the IPER limits will be demonstrated by compliance with the minimum pressure drop and water flow rates on a 24-hour block (daily) average.  Based on historical stack testing results, one stack test every five years is needed for demonstrating compliance with the IPER.
GP003 (Furnaces: EU020 – EU022; CE022 – CE036; SV021 – SV032)	PM: $\leq 0.30$ gr/dscf, each unit (Minn. R. 7011.0715)  Opacity: $\leq 20$ % with exemptions (Minn. R. 7011.0715)	One stack test on all stacks associated with one emission unit during the permit term on a rotating basis.	Ongoing compliance with the direct heating equipment rule limits will be demonstrated by compliance with the minimum pressure drop and water flow rates on a 24-hour block (daily) average.  The Taconite NESHAP requires two performance tests per emission unit every five years. Based on historical stack testing results, however, only one stack test every five years is needed for demonstrating compliance with the direct heating equipment rule.
	*To confirm assumptions used in permitting to avoid major modification under 40 CFR 52.21	Onetime stack test on all stacks associated with each emission unit.	Test to determine the validity of the NO <sub>x</sub> emission factor used in the netting analysis to avoid a major modification under 40 CFR 52.21.
GP004 (Pelletizing – Scrubbers: EU018 – EU019, EU023 – EU027; CE018 – CE021, CE037 – CE041; SV017 – SV020, SV033 – SV037)	PM: $\leq 0.30$ gr/dscf, each booth (Minn. R. 7011.0715)  Opacity: $\leq 20$ % (Minn. R. 7011.0715)	One stack test during the permit term for one emission unit in the test groups as defined in GP004 on a rotating basis	Ongoing compliance with the IPER limits will be demonstrated by compliance with the minimum pressure drop and water flow rates on a 24-hour block (daily) average.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
GP005 (Pelletizing – Baghouses: EU016 – EU017, EU028 – EU029, EU033 – EU035; CE016 – CE017, CE042 – CE044; SV015 – SV016, SV038 – SV039, SV043 – SV044)	PM: $\leq 0.30$ gr/dscf, each booth (Minn. R. 7011.0715)  Opacity: $\leq 20$ % (Minn. R. 7011.0715)	One stack test during the permit term for one emission unit in the test groups as defined in GP005 on a rotating basis.  Daily visible emissions checks are required for opacity; if they cannot be performed, daily pressure drop readings must be taken. A bag break detector is an alternative.	These emissions units are day bins and silos that store bentonite and limestone; they are not subject to the Taconite NESHAP. Emissions from these sources are small because they are intermittent and controlled.
GP013 (Fugitive Ore Handling Sources: FS001 – FS030)	Prevent Particulate Matter from Becoming Airborne (Minn. R. 7011.0150)	None	Compliance with the fugitive dust plan, required by the Taconite NESHAP, will satisfy the periodic monitoring for this rule.
EU036 (Paint Booth)	PM: $\leq 0.30$ gr/dscf, each booth (Minn. R. 7011.0715)  Opacity: $\leq 20$ % (Minn. R. 7011.0715)	Monitor the gas stream pressure drop across the filter to meet the required minimum; periodic inspection	The paint booth is used intermittently and infrequently. Measuring the pressure drop across the filter when in use will help ensure compliance with the PM and opacity limits. The periodic inspection is a component of the Operation and Maintenance Plan.

\*NOx performance test requirement was added during the public comment period.

Emission units subject to the Taconite NESHAP must demonstrate compliance through periodic stack testing. At Hibbing Taconite, testing of the straight grate indurating furnace must be conducted no less frequently than twice during each five year (Part 70) permit term; this frequency may be increased by MPCA policy, if necessary. Other units subject to the Taconite NESHAP will demonstrate compliance at least once per five year permit term, although the frequency may increase due to MPCA's policy.

Previous performance tests are used, in part, to determine the frequency of future testing. Results of previous stack tests can be found in Attachment 5 to this document.

In the permit, the requirement to test is found at the CE (control equipment level). A summary of testing frequency required for the Taconite NESHAP follows below:

**Table 8: Performance Test Frequency for Taconite NESHAP Emission Units**

<b>Emission unit</b>	<b>Frequency</b>	<b>Comment</b>
GP001 (EU001/CE001; EU002/CE002; EU003/CE003 & EU004/CE004)	CE001, CE003, CE004: Once every five years  CE002: Once every three years	Historical stack tests indicate that emissions are below 60 percent of the limit, except for EU002. Historical emissions from EU002 are between 60 and 90 percent of the limit.
GP002 (EU005/CE005; EU006/CE006; EU007/CE007; EU008/CE008; EU009/CE009; EU010/CE010; EU011/CE011; EU012/CE012; & EU013/CE013)	CE006, CE007, CE008, CE009, CE011, CE012, CE013: Once per five years  CE005 and CE010: Once every three years	Historical stack tests indicate that emissions are below 60 percent of the limit, except for EU005/CE005 and EU010/CE010. Historical emissions from EU005/CE005 and EU010/CE010 are between 60 and 90 percent of the limit.
GP003 (EU020/CE022; EU020/CE023; EU020/CE024; EU020/CE025; EU021/CE027; EU021/CE028; EU021/CE029; EU021/CE030; EU022/CE032; EU022/CE033; EU022/CE034; & EU022/CE035)	CE022, CE023, CE024, CE025, CE027, CE028, CE029, CE030, CE032, CE033, CE034, CE035: Twice every five years	Historical stack tests indicate that emissions are below 60 percent of the limit. The requirement for two stack tests every five years comes from the Taconite NESHAP.
GP004 (EU018/CE018; EU018/CE020; EU019/CE019; EU019/CE021; EU023/CE037; EU024/CE038; EU025/CE039; EU026/CE040; & EU027/CE041)	CE018, CE019, CE020, CE021, CE037, CE038, CE039, CE040: Once per five years  CE041: Annually	Historical stack tests indicate that emissions are below 60 percent of the limit, except for EU027/CE041. Historical emissions from EU027/CE041 exceeded 90 percent of the limit.

Since IPER measures a different pollutant and imposes a different limit, the testing frequency differs from that of the Taconite NESHAP. In addition, some emission units subject to the IPER are not subject to the Taconite NESHAP. The testing frequencies are summarized in the Table 9:

**Table 9: Performance Test Frequency for Emission Units Subject to IPER**

<b>Emission unit</b>	<b>Frequency</b>	<b>Comment</b>
GP001 (EU001/CE001; EU002/CE002; EU003/CE003 & EU004/CE004)	CE001, CE002, CE003, CE004: Test one of four stacks once per five years in rotation	Historical stack tests indicate that emissions are below 60 percent of the limit.
GP002 (EU005/CE005; EU006/CE006; EU007/CE007; EU008/CE008; EU009/CE009; EU010/CE010; EU011/CE011; EU012/CE012; & EU013/CE013)	CE005, CE006, CE007, CE008, CE009, CE010 CE011, CE012, CE013: Test two of nine stacks once per five years in rotation	Historical stack tests indicate that emissions are below 60 percent of the limit.
GP004 (EU018/CE018; EU018/CE020; EU019/CE019; EU019/CE021; EU023/CE037; EU024/CE038; EU025/CE039; EU026/CE040; & EU027/CE041)	CE018, CE020: Test one of two stack once per five years in rotation  CE019, CE021: Test one of two stacks once per five years in rotation  CE037, CE038, CE039: Test one of three stacks once per five years in rotation  CE040: Test once per five years  CE041: Test once per five years.	Historical stack tests indicate that emissions are below 60 percent of the limit.
GP005 (EU016/CE016; EU017/CE017; EU028/CE042; EU029/CE043; & EU033/CE044)	CE016, CE017: Test one of two stacks once per five years in rotation  CE042, CE043, CE044: Test one of three stacks once per five years in rotation	Historical stack tests indicate that emissions from the bentonite day bins are below 60 percent of the limit. The throughput of the day bins (CE016 & CE017) is small, with the annual emissions of each stack less than 2 tpy, so testing both of the stacks is unnecessary.  The bentonite and limestone storage silos (CE042, CE043, & CE044) are used intermittently and should have small emissions. Because emissions are anticipated to be very low, only one of them needs to be tested each five years to assess the emissions.

The units in GP003 are subject to the direct heating fossil-fuel-fired equipment rule. The members of that group must test to demonstrate compliance with that standard. The testing frequency is summarized in Table 10.

**Table 10: Performance Test Frequency for Emission Units  
Subject to the Direct Heating Equipment Rule**

<b>Emission unit</b>	<b>Frequency</b>	<b>Comment</b>
GP003 (EU020/CE022; EU020/CE023; EU020/CE024; EU020/CE025; EU021/CE027; EU021/CE028; EU021/CE029; EU021/CE030; EU022/CE032; EU022/CE033; EU022/CE034; & EU022/CE035)	CE022, CE023, CE024, CE025, CE027, CE028, CE029, CE030, CE032, CE033, CE024, CE035: Test all stacks associated with one EU once per five years in rotation	Historical stack tests indicate that emissions are below 60 percent of the limit.

### **3.4 Setting and Changing Parameters under the Taconite NESHAP**

HTC operates several units subject to the Taconite NESHAP (40 CFR 63 subp. RRRRR). This regulation requires that continuous parameter monitoring systems (CPMS) be used to demonstrate continuous compliance with the emission limits. HTC uses wet scrubbers and venturi scrubbers to comply with the NESHAP. For these types of control equipment, the Taconite NESHAP requires that the company set minimum water flow rates and pressure drops across the control device.

The Taconite NESHAP allows the Permittee to change the parameter limits through performance testing, but does not specify the mechanism for changing these parameter limits. Based on its discussions with US EPA Region 5 regarding similar conditions, however, the MPCA believes the parameter limits must be incorporated into a permit to be enforceable. For this reason, the permit contains the parameter limits that are current as of the time of permitting. Furthermore, the Permittee may change the parameter limits according to the process described below.

The Permittee may request to change the established parameter limits through a scheduled or voluntary performance test that demonstrates compliance with the emission limit. The Permittee must meet all notifications and submittal requirements for performance testing. The Permittee may then conduct the Performance test and may select revised parameter limits for MPCA review in accordance with the applicable regulations. After the facility submits its test results to the MPCA, the MPCA will review them and – if they indicate compliance with the Taconite NESHAP – send out a Notice of Compliance (NOC) to the facility. The MPCA will then include these changes in the next permit action for the facility. One potential permit action is a reopening of the permit initiated by the MPCA to update these parameter limits.

### 3.5 Insignificant Activities

HTC has several operations classified as insignificant activities. The permit is required to include periodic monitoring for all emissions units, including insignificant activities, per EPA guidance. The insignificant activities at this Facility are only subject to general applicable requirements. Using the criteria outlined earlier in this TSD, the following table documents the justification why no additional periodic monitoring is necessary for the current insignificant activities.

**Table 11. Insignificant Activities**

<b>Insignificant Activity</b>	<b>General Applicable Emission limit</b>	<b>Discussion</b>
Fuel burning equipment with a capacity less than 500,000 Btu/hour, etc.	$PM \leq 0.6$ or $0.4$ , depending on year constructed  $Opacity \leq 20\%$ with exceptions  (Minn. R. 7011.0510/515)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirements.
Diesel-powered light plants	$SO_2 \leq 0.50$ lb/MMBtu  $Opacity \leq 20\%$ once operating temperatures have been met  (Minn. R. 7011.2300)	For these units, based on the fuels used and EPA published emissions factors, it is highly unlikely that they could violate the applicable requirements.
Brazing, soldering or welding equipment	$PM$ , variable depending on airflow  $Opacity \leq 20\%$  (Minn. R. 7011.0710/715)	For these units, based on EPA published emissions factors, it is highly unlikely that they could violate the applicable requirement. In addition, these units are typically operated and vented inside a building, so testing for $PM$ or opacity is not feasible.
Fugitive dust from conveying concentrate	$Opacity \leq 10\%$  (40 CFR pt. 60, subp. LL)	No periodic monitoring is needed. The moisture content of the concentrate (roughly 9%) is sufficient to suppress dust formation, eliminating the opportunity for opacity.

### 3.6 Permit Organization

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. However, the requirement to periodically test the front-catch particulate emissions limited by the Taconite NESHAP and controlled with wet scrubbers, Venturi scrubbers, or baghouses is placed at the control equipment (CE) level where it appears with the parametric monitoring limits (minimum water flow and pressure drops). Also, while the parametric monitoring limits associated with IPER compliance appear at the CE level, the requirement to periodically test total particulate emissions limited by the IPER is placed at the associated group level due to the rotating nature of the performance testing regime. Since these requirements are



not placed at the emission unit (EU) level, the permit is shortened; in addition, one emission unit can have as many as four associated stacks or vents, so the placement at the CE level provides some clarity as well.

### **3.7 Comments Received (First Comment Period)**

Public Notice Period: June 24, 2008 - July 23, 2008

EPA 45-day Review Period: June 24, 2008 – August 8, 2008

The MPCA received three comment letters during the initial public notice period. Comments were provided by the Fond du Lac Band of Lake Superior Chippewa, the Leech Lake Band of Ojibwe, and by Hibbing Taconite Company. Copies of the comments are provided in Attachment 6. These comments included adverse comments on applicable requirements of the permit.

Many of the comments received by the MPCA in the initial comment period did not result in permit changes.

Hibbing Taconite Company submitted a comment to the MPCA that has resulted in permit changes. HTC determined that a new 1,825kW diesel generator (EU038) is not subject to 40 CFR pt. 63, Subpart ZZZZ (NESHAP for Stationary Reciprocating Internal Combustion Engines) and requests that the permit reflect this determination and that a permit shield be provided for this determination. Upon further review, the MPCA has concluded that HTC is correct in their applicability determination and has further found that the generator is not subject to 40 CFR pt. 60, Subpart IIII (Standards of Performance for Stationary Internal Compression Ignition Engines) due to the non-road, non-stationary classification of the generator. Attachment 7 is a letter depicting the regulatory justification for this determination and USEPA Region V concurrence.

### **3.8 Comments Received/Changes Made (Second Comment Period)**

Public Notice Period: November 18, 2009 - December 17, 2009

EPA 45-day Review Period: November 18, 2009 - January 4, 2010

The MPCA received one comment from the Leech Lake Band of Ojibwe during the second public notice period. The comment received did not include adverse comments on any applicable requirements of the permit. Changes to the permit were not made as a result of the comments. The comment letter and MPCA response can be found in Attachment 9.

The revised permit was sent to EPA for their 45-day review on November 18, 2009. Due to the holiday on Friday, January 1, 2010 and the following weekend, the EPA review period ended on Monday January 4, 2010. No comments were received from EPA during the review period.

There were two changes made to the permit during the public comment period that did not result from any comments received. The two changes made to the permit do not require public notice of the permit. The changes are described below.

Staff from the MPCA met with representatives from HTC on December 10, 2009 to discuss the meaning of the sulfur dioxide limitation in Minn. R. 7011.0610, subp. 2. In this discussion, two issues were raised. First, the company believed that the limit applied only to all sulfur dioxide generated from the combustion of fuel; the MPCA clarified that the limit applied to all sulfur dioxide “discharged into the atmosphere” from an emission unit subject to the Fossil-Fuel-Fired Direct Heating Equipment rule. For HTC, this means that any sulfur dioxide that is generated from fuel combustion or from the oxidation of sulfur volatilized from the ore contributes to the sulfur dioxide emissions that are limited by the rule. This clarification did not require a change to the permit.

The second issue also involved Minn. R. 7011.0610, subp. 2. To calculate compliance with the sulfur dioxide limit discussed above, a condition in GP003 accounts for the contribution of sulfur dioxide from the ore. However, the permit requirement did not specify if the 0.75 lb/MMBtu referred to the sulfur dioxide content in the flue gas or to the sulfur content in the fuel. After conducting a thorough review of the Technical Support Document for Air Emission Permit No. 13700061-001, the MPCA determined that the 0.75 lb/MMBtu applies to the sulfur dioxide content in the flue gas. To clarify the permit, the condition now reads 0.75 lb SO<sub>2</sub>/MMBtu.

The second change to the permit was a result of conversations that occurred during the second public comment period between Owen Seltz of the MPCA and Trent Wickman of the United States Forest Service (Mr. Wickman represents the Federal Land Managers for the Boundary Waters Canoe Area Wilderness). The conversations identified that HTC would need to undergo a NO<sub>x</sub> performance test to confirm the NO<sub>x</sub> emission factor that was used in the netting analysis. The permit now identifies in GP003 under the subject item ‘Performance Testing Requirements,’ the Permittee shall complete a NO<sub>x</sub> performance test on each indurating furnace following the associated lower burner replacement/modification. Table 7 has been updated to include the NO<sub>x</sub> performance test requirement.

#### **4. Conclusion**

Based on the information provided by Hibbing Taconite Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700061-003 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:      Dick Cordes, P.E. (permit writer/engineer)  
   Owen Seltz, (permit writer/engineer)  
   Bob Beresford, Duluth (enforcement)  
   Andy Place (stack testing)  
   Trevor Shearen (peer reviewer)

AQ File No. 541; DQ# 1210 (incorporates DQ# 1934, 2260, 2406, 2547, 2638)

Attachments:                              1.    Facility PTE Summary  
   2.    Emission Increase Calculations

3. Facility Description
4. CD-01 Forms
5. Recent Performance Test Results
6. Comment Letters (first comment period)
7. USEPA Region V Applicability Determination Letter
8. Applicant's CAM submittal
9. Comment Letters (second comment period)

### **Attachment 1 – Facility PTE Summary**

Attachment included in the AQ file copy and is available upon request.



### **Attachment 2 – Emission Increase Calculations**

Attachment included in the AQ file copy and is available upon request.



### **Attachment 3 – Facility Description**

Attachment included in the AQ file copy and is available upon request.





#### **Attachment 4 – CD-01 Forms**

Attachment included in the AQ file copy and is available upon request.



### **Attachment 5 – Recent Performance Test Results**

Attachment included in the AQ file copy and is available upon request.



**Attachment 6 – Comment Letters (first comment period)**

Attachment included in the AQ file copy and is available upon request.



**Attachment 7 – USEPA Region V Applicability Determination Letter**

Attachment included in the AQ file copy and is available upon request.





### **Attachment 8 – Compliance Assurance Monitoring Plan**

Attachment included in the AQ file copy and is available upon request.



**Attachment 9 – Public Comment Letters (second comment period)**

Attachment included in the AQ file copy and is available upon request.