

AIR EMISSION PERMIT NO. 13700032-001

IS ISSUED TO

**NORTHSHORE MINING COMPANY
Cleveland Cliffs, Inc.**

Peter Mitchell Mine
Seven Miles East of Babbitt on County Road 70
Babbitt (St. Louis County), MN 55706

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
Total Facility Operating Permit

Application Date
Update submitted February 18, 2003

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

Permit Type: Federal; Pt 70/Major for NSR

Issue Date: June 14, 2005

Expiration: June 14, 2010
All Title I Conditions do not expire.

Richard Sandberg, Manager
Air Quality Permits Section
Industrial Division

for Sheryl A. Corrigan
Commissioner
Minnesota Pollution Control Agency

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Table C: Compliance Schedule

Appendices: Attached and Referenced in Table A

NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

FACILITY DESCRIPTION:

The Permittee owns and operates the Peter Mitchell Mine, an open pit taconite mine. Taconite is a type of iron ore containing approximately 15 percent to 30 percent iron. The facility mines taconite ore and crushes the ore in one of two crushers. One crusher is controlled by a baghouse and the other (not operated in many years) has a multiclone, but if operated in the future upgraded controls would be required. Crushed ore is shipped out by rail to the Northshore Silver Bay facility. The mining activities that generate dust include material handling, crushed ore storage piles at the crusher and rail loading. A portable aggregate crusher is used to crush aggregate for blast stemming, drill pad construction, haul road surfacing, or railroad ballast. The facility conducts blasting as well. The facility has four shop boilers that can burn used oil, propane, and fuel oil Nos. 2, 5, and 6. The facility is required to have a fugitive emissions control plan to ensure fugitive dust emissions are minimized.

Appendix I

Additional Appendix Material

-- Insignificant Activities

Minn. R. 7007.1300, Subp.:	Activity	Applicable Requirements
3(A)	Portable space heaters in shop areas, not connected to duct work	Minn. R. 7011.0610
3(C)	Three blacksmithing furnaces for treating hot metal parts	Minn. R. 7011.0715
7008.4110	Two Pangborn Rotoblaster metal bead blasters with integral dust collectors	Minn. R. 7011.0715
3(H)(3)	Welding Machines	Minn. R. 7011.0715
3(I)	Fixed space heaters in Crusher, Drive House, and Loadout Bins, propane-fired, 8 MMBTU/hr total capacity	Minn. R. 7011.0610
3(I)	Baghouse fines pile	Minn. R. 7011.0150
3(K)	Spray painting for routine maintenance, not a production activity	Minn. R. 7011.0715

-- Daily Visible Emissions Checklists – Explanation and an Example

The Permittee shall develop Daily Visible Emission Checklists for stacks equipped with dry control equipment and fugitive dust sources as described in the permit and associated Operation & Maintenance Plan and Fugitive Control Plan. An example is provided on the next page. Note that fabric filters (baghouses) that are equipped with MPCA-approved broken bag detectors are not subject to daily visible emission inspection.

A checklist may cover only a few stacks, a few fugitive emission sources, or a number of stacks and nearby fugitive emission sources. Weather condition codes (ambient air temperature; and “clear,” “foggy,” or “raining/snowing”.) shall be included in the checklists to help in assessing whether ambient air conditions were conducive to making the visible emissions check. An off-site regional data source such as Northshore Mining’s Silver Bay plant may be used for ambient temperature measurement.

Daily Visible Emission Checklist (Part of the O & M Plan): *An example**

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

Record "OK" if equipment does not require attention.

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

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

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

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

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

S V	EU	CE	Operator ID	Description	SU N	MO N	TUE	WE D	TH U	FRI	SA T
				Year Date →							
				Time →							
				Initials →							

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

Date ____/____/____ Employee _____ # _____

* *This is an example for the Permittee to develop its own checklists. This example may not have included all the requirements specified in the text of this Appendix or permit or relevant information required through other regulatory actions in effect.*

A similar checklist shall be used for fugitive emission sources for this permit.

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

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

Subject Item:**Total Facility**

What to do	Why to do it
A. OPERATIONAL REQUIREMENTS	hdr
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Comply with Fugitive Emission Control Plan: Follow the actions and record keeping specified in the plan. The plan may be amended with the Commissioner's approval. If the Commissioner determines the permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. R. 7011.0150, and 7007.0800, subp. 2
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Comply with the O&M Plan: Follow the actions and record keeping specified in the O&M plan. The plan may be amended with the Commissioner's written approval.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Noise: 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
B. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
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: Ensure that within 6 months of permit issuance at least one Northshore Mining employee obtain an initial EPA Method 9 certification and be recertified every three years or employ a similarly certified contractor. This person will design and implement a program to train other plant employees to perform the daily visible emissions check as detailed in the O&M Plan and Fugitive Control Plan.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)
Daily Visible Emissions Checklists for the Fugitive Control Plan: FS 001 through FS 008 must appear individually in at least one of the Daily Visible Emissions Checklists. Observations and observation dates, weather condition codes, whether and what corrective actions(s) had been taken, and observer's ID must be included in the checklists or an associated record. Appendix I contains details regarding the checklists.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

<p>Fugitive Dust Observations: Prior to the approval of the fugitive control plan, observe fugitive dust sources FS 001 through FS 008 once daily during daylight hours. Forms meeting the checklist requirements described in the permit shall be used to check fugitive dust control practices and record observations. In the event the Permittee makes a finding that attention to fugitive dust sources is required, the Permittee shall investigate the fugitive dust sources and implement corrective actions, if necessary.</p> <p>Upon approval of the fugitive control plan, observe fugitive dust sources FS001 through FS 008 once daily during daylight hours. Use the daily visible emissions checklists in the fugitive dust control plan as a means to indicate when appropriate corrective actions in the fugitive control plan are taken.</p>	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)
D. RECORD KEEPING REQUIREMENTS	hdr
Record keeping: 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)
<p>Contractors: Retain records on site of all contractors that are allowed on site that include any crushers. Retain records on site of all contractors whose operations would require an Air Emission Permit from the MPCA. The records shall include the contractor's company name, MPCA air emission permit number, short description of activities undertaken by the contractor, estimate of emissions or material handled and the dates the contractor was on site. The record shall be updated at least monthly.</p> <p>Evaluate if the activities of any contractor required NSR permitting prior to the contractor performing such activities. If a contractor has its own permit, but it is determined that the contractor is under the common control of the taconite mine then the contractor's permit does not shield the taconite mine or the contractor from the NSR & Part 70 modification regulations or enforcement actions.</p>	Minn. R. 7007.0800, subp. 2
E. REPORTING REQUIREMENTS	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
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> 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
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	Minn. R. 7019.1000, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
F. MISCELLANEOUS	hdr
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: If needed and justifiable, 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: 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
Operation Changes: In any shutdown, breakdown, or deviation 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
Comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

Subject Item: GP 001 Shop Boilers**Associated Items:** EU 001 Shop Boiler 1

EU 002 Shop Boiler 2

EU 003 Shop Boiler 3

EU 004 Shop Boiler 4

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.6 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0510, subp. 2
B. OPERATION REQUIREMENTS	hdr
Burn only the following fuels: EU001 Shop Boiler No. 1: Fuel Oil No. 2, Used Oil EU002, EU003, EU004 Shop Boilers 2 to 4: Any grade of commercial fuel oil, Used Oil, and Propane	Minn. R. 7011.0610
Record the amount of each type of fuel burned, and estimate the portion burned in each boiler by fuel flow or operating hours, by the 15th of the month for the previous month. Obtain and maintain a certification of the fuel oil sulfur maximum weight percent for each type of fuel oil used.	Minn. R. 7007.0800, subp. 4(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

Subject Item: GP 002 Ore Crushers**Associated Items:** CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 005 Crusher 1

EU 006 formerly Crusher 1a

EU 007 Crusher 2

EU 008 Crusher 2a

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735; or alternatively as below:	Minn. R. 7011.0710, subp. 1
Total Particulate Matter: greater than or equal to 85 percent collection and control efficiency, provided that the entire emission facility is in compliance with NAAQS and MAAQS and the emission facility is located not less than one fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance for Total Particulate Matter Limit under Minn R. 7011.0710 subp. 1).	Minn. R. 7011.0710 subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1
CONTROL EQUIPMENT REQUIRED	hdr
Operate and maintain CE001 (fabric filter) at all times EU005 (Crusher No. 1) is in operation.	Minn. R. 7011.0710 and 7007.0800
Before operating Crusher No. 2 (EU 007 and 008), do an applicability determination, apply for any appropriate permit amendment, and install and operate control equipment with a capture and control efficiency at least as efficient as the fabric filter on Crusher No. 1 (EU 005). Operate and maintain the control equipment at all times Crusher No. 2 is in operation.	Minn. R. 7011.0710 and 7007.0800
CONTROL EQUIPMENT MONITORING	hdr
Install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4(D), 14, 16(J)
Gas Stream Pressure Drop on Crusher Fabric Filter(s): Monitor and record at least once each operating day. Establish the fabric filter operating range in the O&M Plan. A deviation from the established range shall trigger a corrective action as detailed in the O&M Plan.	Minn. R. 7007.0800, subp. 4(D), 14, 16(J)
Process Monitoring: Check the fabric filter(s) for any visible emissions at least once each operating day during daylight hours. If a broken bag detector is approved by the MPCA, visible emissions checks for this equipment are not required.	Minn. R. 7007.0800, subp. 4(D), 14, 16(J)
Recordkeeping of Visible Emissions and Pressure Drop: Record the time and date of each visible emission inspection and pressure drop reading, whether or not any visible emissions were observed, whether or not the observed pressure drop was within the range established in the O&M plan, and what, if any corrective actions were taken.	Minn. R. 7007.0800, subp. 4(D), 14, 16(J)
Initial Performance Test: due 180 days after Permit Issuance (or initial startup, whichever is later) for Total Particulate Matter and Opacity for each ore crusher.	Minn. R. 7017.2020, subp. 1
Performance Test Notifications and Submittals: Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-Test Meeting: due 7 day before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy or CD: due 105 day after each Performance Test. The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. R. 7017.2030, subp. 1-4; Minn. R. 7017.2018 and Minn. R. 7017.2035, subp. 1-2

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

Subject Item: GP 003 Crushed Ore Loadout**Associated Items:** EU 010 Ore Loadout at Crusher 1

EU 011 Ore Loadout at Crusher 2

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735; or alternatively as below:	Minn. R. 7011.0710, subp. 1
Total Particulate Matter: greater than or equal to 85 percent collection and control efficiency, provided that the entire emission facility is in compliance with NAAQS and MAAQS and the emission facility is located not less than one fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance for Total Particulate Matter Limit under Minn R. 7011.0710 subp. 1).	Minn. R. 7011.0710 subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1
Check for any visible emissions at least once each operating day during daylight hours.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)
Recordkeeping of Visible Emissions: Record the time and date of each visible emission inspection, whether or not any visible emissions were observed, and what, if any, corrective action was taken.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

Subject Item: EU 009 Portable Aggregate Crushing**Associated Items:** SV 009

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Check for any visible emissions at least once each operating day during daylight hours.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)
Recordkeeping of Visible Emissions: Record the time and date of each visible emission inspection, whether or not any visible emissions were observed, and what, if any, corrective action was taken.	Minn. R. 7007.0800, subp. 4(D), 14, and 16(J)

TABLE B: SUBMITTALS

06/14/05

Facility Name: Northshore Mining Co - Babbitt
Permit Number: 13700032 - 001

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

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

Send any application for a permit or permit amendment to:

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

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

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

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

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

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

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

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

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

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Attainment Demonstration Plan	due 90 days after Computer Dispersion Modeling Results. The attainment demonstration plan is due 90 days after the refined modeling results are submitted if the refined modeling results do not demonstrate attainment with the NAAQS and MAAQS. The plan may include an ambient air monitoring network, installation of pollution control equipment, and/or further refinements to the computer modeling. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Computer Dispersion Modeling Results	due 120 days after receipt of written MPCA request notifying that the last of the taconite plant Title V permits in Minnesota has been issued. The modeling required by this condition is the refined modeling for PM10. This is a state-only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Fugitive Control Plan	due 60 days after Permit Issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures, monitoring and record keeping. The plan shall contain the information described in this permit for fugitive dust observations. The Commissioner may require additions or changes to the fugitive control plan when granting approval. The permittee will be given an opportunity to comment on any required additions or changes to the plan before the Commissioner grants approval of the plan. The plan may be amended by the permittee with the Commissioner's approval.	Total Facility
Testing Frequency Plan	due 60 days after Initial Performance Test for Total Particulate Matter and Opacity for each ore crusher. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	GP002

TABLE B: RECURRENT SUBMITTALS

06/14/05

Facility Name: Northshore Mining Co - Babbitt

Permit Number: 13700032 - 001

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

TECHNICAL SUPPORT DOCUMENT
For
DRAFT AIR EMISSION PERMIT NO. 13700032-001
Northshore Mining Company
Cleveland Cliffs, Inc.
Babbitt Peter Mitchell Mine

This technical support document is intended for all parties interested in the draft 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 draft permit.

1. General Information

1.1. Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 1011)
Northshore Mining Company Cleveland Cliffs, Inc. 10 Outer Drive Silver Bay, MN 55614-1499	Peter Mitchell Mine 7 miles East of Babbitt on County Rd. 70 St. Louis County 55706
Contact: Nancy Smith Phone: (218) 226-6083	

1.2. Description of the Permit Action

This permit is for a Part 70 total facility operating permit. The facility is a taconite ore mine with crushing and rail car loading equipment. In addition, there are four boilers and fugitive mine activities such as ore blasting, material handling, storage piles, unpaved roadways, and a portable crusher.

1.3 Description of any Changes Allowed with this Permit Issuance

This permit allows the use of additional fuels in the facility boilers, as proposed by Northshore Mining in their March 7, 2003, Contravening Permit Terms application. The boilers could burn all of the proposed fuels prior to January 6, 1975. Therefore, the additional fuels are not subject to PSD review. The fuels listed in Permit No. 27C-89-OT-1, Amendment No. 1 and the fuels allowed under this permit are shown below in Table 1. Consistent with other similar facilities “any grade of commercial fuel oil” is used in the permit where applicable.

Table 1.
Allowable Boiler Fuels under this Permit Action

Emission Unit	Allowable Fuels	
	Permit No. 27C-89-OT-1, Amendment No. 1	This Permit Action
Boiler No. 1	No. 2 fuel oil, used oil	No. 2 fuel oil, used oil
Boiler No. 2	Nos. 2 and 5 fuel oil, propane	Any grade of commercial fuel oil (i.e., Nos. 2, 5, 6 fuel oil, and No. 2 blend), used oil, propane
Boiler No. 3	Nos. 2 and 5 fuel oil, propane	Any grade of commercial fuel oil, used oil, propane
Boiler No. 4	No. 2 fuel oil, propane	Any grade of commercial fuel oil, used oil, propane

1.4 Permit History

Permit Number and Issuance Date	Action Authorized
27C-89-OT-1	Total facility operating permit.
Amendment No. 1 to 27C-89-OT-1	Amendment allowing the use of No. 5 fuel oil in Boilers #2 and #3
March 7, 2003, Contravening Permit Terms Application	Application for the use of additional fuels as shown in Table 1 above.

1.5. Facility Emissions:

Table 2. Total Facility Potential to Emit Summary

	PM tpy	PM ₁₀ tpy	SO ₂ tpy	NO _x tpy	CO tpy	VOC tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	2552	2306	402	56.6	6.2	1.3	6.9	8.1
Total Facility Actual Emissions (2003)	245	156	38	5.5	0.6	0.04	HAPs not reported in emission inventory	

Table 3. Facility Classification

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

2. Regulatory and/or Statutory Basis

New Source Review

The facility is an existing major source under New Source Review. The Contravening Permit Terms application submitted in 2003 for use of additional fuels in the facility's boilers is not considered a modification under NSR since the boilers were capable of burning all of the fuels before 1975, similar to the 1989 amendment (Permit No. 27C-89-OT-1, Amendment No. 1).

Part 70 Permit Program

The facility is a major Title V source.

New Source Performance Standards (NSPS)

Both the facility's crushers and boilers are considered existing equipment under the 40 CFR 60 Subp. LL and Dc respectively. Therefore, these NSPS are not applicable.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

The facility is a minor source of HAPs after considering particulate emissions control at the crushers, rail loading, and fugitive sources. Therefore, the Industrial, Commercial, and Institutional Boilers and Process Heaters MACT (40 CFR 63 Subpart DDDDD) is not applicable.

The facility does not meet the definition of a "Taconite Iron Ore Processing Facility" under 40 CFR 63 Subpart RRRRR, since the facility does not separate and concentrate taconite ore. 40 CFR 63 Subpart RRRRR does not apply to minor HAP sources either.

Minnesota State Rules

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

- Minn. R. 7011.0510 Standards of Performance for Existing Indirect Heating Equipment
- Minn. R. 7011.0710 Standards of Performance for Pre-1969 Industrial Process Equipment

Table 3. Regulatory Overview of Facility

EU, GP, or SV	Applicable Regulations	Comments:
GP001 - Shop Boilers, EU001, EU002, EU003, EU004	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment. Determination of applicable limit from rule: <ul style="list-style-type: none">• The emission units were constructed in 1955;• The facility is located outside the cities in Table I;• The unit capacity is less than 250 MMBtu/hr; and• The facility has less than 250 MMBtu/hr of indirect heating equipment.
GP002 - Particulate Emission Sources, EU005, EU007, EU008, EU009, EU010, EU011	Minn. R. 7011.0710	Standards of Performance for Pre-1969 Industrial Process Equipment. Determination of applicable limit from rule: The emission units were constructed in 1955.

3. Technical Information

Performance testing was performed on Crusher No. 1 on June 25, 1996. Neither of the primary and secondary crushing exhaust points on Crusher No. 1 met the particulate standards from the Minnesota Industrial Process Equipment Rule. The cyclone was replaced with a baghouse with a single exhaust point for both primary and secondary crushing. Crusher No. 2 is a similar emission unit to Crusher No. 1. The operation of control equipment for Crushers No. 1 and No. 2 is needed to ensure compliance with the Industrial Process Equipment Rule.

3.1 Calculations of Potential to Emit

Attachment 1 to this TSD contains Form GI-07, which summarizes the PTE of the Facility, while Attachment 2 contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

3.2 Periodic Monitoring

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

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

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

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

Table 4. Periodic Monitoring

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
GP001 – Shop Boilers	PM: 0.60 lb/MMBtu (MN Rule 7011.0510)	None	Emission calculations predict emissions well below allowable limits from MN Rule. Potential uncontrolled particulate emissions are 62.8 tons per year.
EU005, Crusher No. 1	PM: 0.30 gr/dscf (MN Rule 7011.0710)	Initial stack testing, O&M Plan, and control equipment monitoring, including: daily pressure drop readings and visible emissions checks.	Stack testing on Crusher No. 1, performed on June 25, 1996, indicates that operation of control equipment is needed to meet the PM limit. Therefore, initial performance testing and control equipment monitoring will be included in the permit.
EU007 and EU008, Crusher No. 2	PM: 0.30 g/dscf (MN Rule 7011.0710)	Initial stack testing, O&M Plan, and control equipment monitoring including: daily pressure drop readings and visible emissions checks.	Stack testing on Crusher No. 1 with a multiclone did not meet MN Rule 7011.0710. Therefore, initial performance testing would be required for Crusher No. 2 were it to be re-started, along with control equipment monitoring.
EU009, Portable Aggregate Crusher	PM: 42.64 lb/hr (MN Rule 7011.0710)	Stack testing not feasible since the emission point has no exhaust rate. Visible	Emission calculations predict emissions well below allowable limits from MN Rule.

Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
		emissions checks will be performed.	
EU010 and EU011, Railcar Loading	PM: 75.30 lb/hr (MN Rule 7011.0710)	Stack testing not feasible since the emission points have no exhaust rates. Visible emissions checks will be performed.	Water spray is applied during non-freezing weather prior to loading. Emission calculations indicate that loading emissions are below the PM limits.

3.3 Insignificant Activities

Northshore Mining Co, Peter Mitchell Mine has several operations which are classified as insignificant activities. These are listed in Appendix I of the permit along with their applicable requirements. Attachment 3 to this TSD includes emission calculations for activities that are insignificant based on emissions less than the 7007.1300 subp. 3I or subp. 4 levels.

3.4 Permit Organization

The permit follows the MPCA Delta Guidance for ordering and grouping of requirements. The shop boilers are listed as GP001, while Crushers No. 1 and No. 2 are listed as GP002.

3.5 Public Comments

One comment letter was received during the public comment period regarding the wording of the permit conditions involving the state Industrial Process Equipment Rule. No permit changes were made. The Permittee noticed some small changes that were needed to a few items in the facility description, which were made.

4. Conclusion

Based on the information provided by Northshore Mining Company, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700032-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:

- Stephanie Kuphal, Wenck Associates under contract to MPCA (permit writer/engineer)
- Jeff Peltola (permit project manager)
- Bob Beresford (enforcement)
- Hongming Jiang (peer reviewer)

Attachments: 1. PTE Summary

2. Emissions Calculations
3. Insignificant Activity Emission Calculations

Attachment 1

Potential to Emit Summary

Attachment 2

Emission Calculations

Attachment 3

Insignificant Activity Emission Calculations