AIR EMISSION PERMIT NO. 13700009- 001

IS ISSUED TO

LTV Steel Mining Company

LTV Steel Mining - Hoyt Lakes
County Road 666, Hoyt Lakes
St. Louis County, Minnesota 55750

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

Permit Type	Application Date
Total Facility Operating Permit	January 15, 1995 (supplemented 07/11/95)
Minor Permit Amendment	April 28, 1999

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

This permit replaces and supersedes all previous air emission construction and operating permits and contains all existing Title I conditions.

Permit Type: Federal ; Part 70
Issue Date: December 21, 2000
Expiration: December 21, 2005
All Title I Conditions do not expire.

Ann M. Foss
Manager
North and South Major Facilities

For Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

SA:yma

TABLE OF CONTENTS

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 rule governing these programs are contained in Minn. R. 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. Any applicable requirements which have been determined not to apply are identified as not applying in Table A of this permit.

The permit shield, however does not apply to: Minn. R. ch. 7030 (Noise Pollution Control), and Minn. R. ch. 7009 (National Ambient Air Quality Standards and Minnesota Ambient Air Quality Standards).

EMERGENCY DEFENSE:
An emergency defense for noncompliance is available under Minn. R. 7007.1850.

FACILITY DESCRIPTION:
The Permittee operates a taconite (iron ore) mine and processing plant near Hoyt Lakes, Minnesota. The facility produces taconite pellets for use as a primary raw ingredient at iron and steel mills. Major activity areas at the facility include: mines and crushers, concentrating, pelletizing, pellet storage and loadout, additive receiving and handling, concentrate storage, loadout and receiving, tailings basin, storage piles and support activities.

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 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
The two coal fired boilers that were decommissioned, but left on site, may not be recommissioned (operated) until the Permittee recieves an appropriate air emission permit amendment.	Title I Condition: Action to remain a minor modification under 40 CFR Section 52.21
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
Fugitive Control Plan: Comply with the fugitive control plan. Follow the actions and recordkeeping specified in the fugitive control 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 fugitive control plan, then the Permittee may be required to amend the fugitive control plan. Prior to approval of the Fugitive Control Plan the Permittee shall observe fugitive emissions from FS005-007, FS009, FS014-FS017, FS020-023, FS028, FS029, and FS032 at least once daily when in operation and take corrective action to control emissions in excess of Minn. R. 7011.0150.	Minn. R. 7011.0150
Compliance With Ambient Standards: Comply with the Fugitive Control Plan and apply best management practices in order to prevent exceedences of the ambient air standards in Minn. R. ch. 7009.	Minn. R. ch. 7009; Minn. R. 7011.0150
Comply with the O & M Plan: Follow the actions and recordkeeping specified in the O & M plan. The plan may be amended by the Commissioners written approval.	Minn. R. 7007.0800 subp. 14 and Minn. R. 7007.0800 subp. 16(J)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times. These standards do not apply on Permittee property.	Minn. R. 7030.0010 - 7030.0080
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
B. PERFORMANCE TESTING REQUIREMENTS	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A and/or B.	Minn. R. ch. 7017
Operating Conditions for Performance Testing: A) Performance Testing for the Coarse Crusher, Drive House 1 and Coarse Ore Storage (EU003-EU013, EU021-EU032, EU086-EU097, EU104-EU115, EU118, EU019, EU121, EU122, EU126, EU127, EU136-EU138 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 90-100% of the estimated capacity of each unit based on the variables used in the Annual Production Rate projection. Throughput shall be determined by rail cars per hour and/or tonnage measured (by scales) on the 1A/1B conveyor. The test plan shall quantify the variables and show the calculation method used to determine the proposed operating rate for each test.	Minn. R. 7017.2025
Operating Conditions for Performance Testing (continued): B) Performance Testing on the Fine Crusher (EU014-EU020 and the associated control equipment and stacks) shall be conducted at a minimum throughput rate of between 90% and 100% of 550 long tons per hour. C) Performance Testing of the Vertical Shaft Furnace Top Gas and Discharge Conveyor Load Points (EU033-EU056, EU061-EU084 and the associated control equipment and stacks) shall be conducted at a minimum furnace feed rate of between 90% and 100% of 60 long tons per hour. The auxilliary emission control devices associated with the pelletizing process including the pellet storage yard will be tested at a throughput rate based on the Annual Production Rate or at greater than or equal to 90% of the capacity listed in Attachment 2 of the Technical Support Document. The test plan shall quantify the variables and show the calculation method used to determine the proposed operating rate for each test.	Minn. R. 7017.2025

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Operating Conditions for Performance Testing (contuinued): D) All other required performance tests shall be conducted at greater than or equal to 90% of the rated capacity of the emission unit. E) If a performance test is conducted at less than the applicable minimum as defined in (A) - (D) 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. F) Performance Testing feed rates for G and H furnace section equipment shall be determined upon reactivation.	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, such as for system breakdowns, repairs, calibration checks, and zero and span adjustments (as applicable). Monitoring records should reflect any such periods of process shutdown.	Minn. R. 7007.0800, subp. 4(D)
Visible Emissions Check: The Permittee shall check visible emissions from SV003 & SV004 once daily when in operation during daylight hours. A form meeting the requirements of Appendix B shall be used to indicate whether process or control equipment requires attention. In the event the Permittee makes a finding that attention is required, the Permittee shall investigate the process and control equipment performance and implement appropriate corrective action, if necessary. Upon approval of the O&M Plan, the Permittee shall check visible emissions from SV003 & SV004 once daily when in operation during daylight hours. The Permittee shall use the visible emissions checklists in the O&M Plan as a means to indicate when appropriate corrective actions in the O&M Plan should be taken. If the Permittee installs Agency approved broken bag detectors on SV003 & SV004, the permittee can use the broken bag detectors in place of the visible emissions checks.	Minn. R. 7007.0800, subp. 4(D) and Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Fugitive Dust Observations: Prior to the approval of the fugitive control plan, the Permittee shall observe fugitive dust sources FS005-007, FS009, FS014-FS017, FS020-023, FS028, FS029, and FS032 once daily during daylight hours. In the event the Permittee makes a finding that attention to fugitive dust sources is required, the Permittee shall investigate the fugitive dust sources and implement corrective action, if necessary. For unpaved haul roads, the Permittee may use the existing Unpaved Haul Road Fugitive Control Plan and may submit this plan for approval as part of the overall fugitive control plan. Upon approval of the fugitive control plan, the Permittee shall observe fugitive dust sources FS005-007, FS009, FS014-FS017, FS020-023, FS028, FS029, and FS032 once daily during daylight hours in accordance with the approved plan.	Minn. R. 7007.0800, subp. 4(D) and Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Visible Emissions Training: The Permittee shall (1) ensure that one plant employee obtain an initial EPA Method 9 certification and be recertified every three years or (2) employ a similarly certified contractor. This person will train other plant employees to perform the daily visible emissions check as detailed in the O&M Plan and Fugitive Control Plan. If the Permittee installs Agency approved broken bag detectors on the control equipment required to have visible emission checks the permittee can use the broken bag detectors in place of the visible emissions checks and the Permittee is not required to implement 1 or 2 above.	Minn. R. 7007.0800, subp. 4(D) and Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 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)

Contractors: The Permittee shall retain records on site of all contractors that are allowed on site that include any crushers, screens and conveyors. The Permittee shall also retain records on site of all contractors whose operations would require an Air Emissions Permit from the MPCA. The records shall include the contractor's company name, MPCA air emissions permit number, short description of activities undertaken by the contractor, estimate of emissions or materials handled and the dates the contractor was on site. The record shall be updated at least monthly. The permittee shall evaluate if the activities of any contractor 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 taconite plant then the contractors permit does not shield the taconite plant or the contractor from the NSR and Part 70 modification regulations or enforcement actions.	Minn. R. 7011.0800 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
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
F. MISCELLANEOUS	hdr
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises, to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.	Minn. R. 7007.0800, subp. 9(A)
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Implement the May 20, 1999, air quality Stipulation Agreement (Agreement), as amended, according to the schedules contained in the Agreement.	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 1(A)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 001 Primary Crushers**

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

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

EU 003 Primary Crushing - North 60"

EU 004 Primary Crushing - South 60"

SV 003

SV 004

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Process monitoring: the visual emissions observer in the facility staff shall check stack visible emissions (opacity) once daily using a checklist that at a minimum contains the information required in Appendix B. If the Permittee uses a broken bag detector approved by the Agency then the Permittee does not need to conduct visible emissions checks for this group.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,095 days after Permit Issuance on one (1) representative unit to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 002 Secondary Crushing**

Associated Items: CE 003 Wet Scrubber-High Efficiency w/o Lime

CE 004 Wet Scrubber-High Efficiency w/o Lime

CE 005 Wet Scrubber-High Efficiency w/o Lime

EU 005 Secondary Crushing - North 1

EU 006 Secondary Crushing - North 3

EU 007 Secondary Crushing - South 1

SV 005

SV 006

SV 007

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 003 Drive House #1**

Associated Items: CE 008 Wet Scrubber-High Efficiency w/o Lime

CE 009 Wet Scrubber-High Efficiency w/o Lime

EU 011 Drive House 1 East Transfer

EU 012 Drive House 1 West Transfer

SV 010

SV 011

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 007 Fine Ore Storage**

Associated Items: CE 143 Wet Scrubber-High Efficiency w/o Lime

CE 144 Wet Scrubber-High Efficiency w/o Lime

CE 145 Wet Scrubber-High Efficiency w/o Lime

CE 146 Wet Scrubber-High Efficiency w/o Lime

CE 147 Wet Scrubber-High Efficiency w/o Lime

CE 148 Wet Scrubber-High Efficiency w/o Lime

EU 137 Fine Ore Storage - North

EU 138 Fine Ore Storage - South

SV 115

SV 116

SV 117

SV 118

SV 119

SV 120

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,095 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 009 Bentonite Addition Sec. A-F**

Associated Items:
CE 088 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 089 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 090 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 091 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 092 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 093 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 126 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 127 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 128 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 129 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 130 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 131 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
EU 086 Bentonite Addition Sec A
EU 087 Bentonite Addition Sec A
EU 088 Bentonite Addition Sec B
EU 089 Bentonite Addition Sec B
EU 090 Bentonite Addition Sec C
EU 091 Bentonite Addition Sec C
EU 092 Bentonite Addition Sec D
EU 093 Bentonite Addition Sec D
EU 094 Bentonite Addition Sec E
EU 095 Bentonite Addition Sec E
EU 096 Bentonite Addition Sec F
EU 097 Bentonite Addition Sec F
SV 078
SV 079
SV 080
SV 081
SV 082
SV 083

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 010 Bentonite Addition G1,G3, H1**

Associated Items:
CE 094 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 096 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 097 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 098 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
CE 099 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
EU 098 Add Bentonite Sec G-1
EU 099 Add Bentonite Sec G-1
EU 100 Add Bentonite Sec G-3
EU 101 Add Bentonite Sec G-3
EU 102 Add Bentonite Sec H-1
EU 103 Add Bentonite Sec H-1
SV 084
SV 086
SV 087
SV 088
SV 089

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Pressure gauge Equipment Installation: due 30 days after Resuming Operation	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Resuming Operation to measure PM and Opacity emissions. When the G1, G3 or H1 furnaces resume operation the corresponding bentonite addition sections shall be tested. The performance tests shall be performed on the stacks that are continous and not the intermittent stacks.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 011 Fine Ore Feeders**

Associated Items:
CE 015 Wet Scrubber-High Efficiency w/o Lime
CE 016 Wet Scrubber-High Efficiency w/o Lime
CE 017 Wet Scrubber-High Efficiency w/o Lime
CE 018 Wet Scrubber-High Efficiency w/o Lime
CE 019 Wet Scrubber-High Efficiency w/o Lime
CE 020 Wet Scrubber-High Efficiency w/o Lime
CE 021 Wet Scrubber-High Efficiency w/o Lime
CE 022 Wet Scrubber-High Efficiency w/o Lime
CE 023 Wet Scrubber-High Efficiency w/o Lime
EU 024 Fine Ore Feeders - North 1-4
EU 025 Fine Ore Feeders - North 5-8
EU 026 Fine Ore Feeders - North 9-12
EU 027 Fine Ore Feeders - North 13-16
EU 028 Fine Ore Feeders - North 17-20
EU 029 Fine Ore Feeders - North 21-24
EU 030 Fine Ore Feeders - South 1-4
EU 031 Fine Ore Feeders - South 5-8
EU 032 Fine Ore Feeders - South 9-12
SV 017
SV 018
SV 019
SV 020
SV 021
SV 022
SV 023
SV 024
SV 025

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

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,460 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 012 Furnaces without Heat Recouperation**

Associated Items:
CE 024 Centrifugal Collector - High Efficiency
CE 027 Centrifugal Collector - High Efficiency
CE 030 Centrifugal Collector - High Efficiency
CE 033 Centrifugal Collector - High Efficiency
CE 036 Centrifugal Collector - High Efficiency
CE 039 Centrifugal Collector - High Efficiency
CE 044 Centrifugal Collector - High Efficiency
CE 047 Centrifugal Collector - High Efficiency
CE 050 Centrifugal Collector - High Efficiency
CE 053 Centrifugal Collector - High Efficiency
CE 056 Centrifugal Collector - High Efficiency
CE 059 Centrifugal Collector - High Efficiency
EU 033 A-1 furnace top gas
EU 035 A-3 furnace top gas
EU 037 B-1 furnace top gas
EU 039 B-3 furnace top gas
EU 041 C-1 furnace top gas
EU 043 C-3 furnace top gas
EU 046 D-2 furnace top gas
EU 048 D-4 furnace top gas
EU 050 E-2 furnace top gas
EU 052 E-4 furnace top gas
EU 054 F-2 furnace top gas
EU 056 F-4 furnace top gas
SV 026
SV 028
SV 030
SV 032
SV 034
SV 036
SV 039
SV 041
SV 043
SV 045
SV 047
SV 049

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 3
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)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Sulfur Dioxide: less than or equal to 2.00 lbs/million Btu heat input using 3-hour Average .	Minn. R. 7011.0610, subp. 2(B)
Sulfur Content of Fuel: less than or equal to 1.88 percent by weight assuming there is no sulfur off gased from the raw materials. The sulfur content of the process raw materials (ore, binder, etc) must also be taken into account and a mass balance of sulfur shall be calculated. The mass balance must be used to determine a fuel sulfur weight percentage that will comply with Minn. R. 7011.0610 subp. 2(B).	Minn. R. 7011.0800, subp. 2
The Permittee shall record the amount of fuel oil burned each day. The amount of natural gas consumed each calendar month shall be recorded no later than the 15th day of the following month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the permittee shall sample the fuel oil from the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The permittee shall analyze the oil sample to determine sulfur content of the fuel oil in percent by weight in accordance with the current ASTM method. The permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 2 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 2.	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due on the date required for testing by the May 20, 1999, stipulation agreement, as amended, on two (2) representative furnaces to measure PM, SO2, and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test on two (2) representative furnace to measure PM and Opacity emissions. Testing shall be conducted on a new set of furnaces every 36 months until all of the furnaces in this group have been tested,as is reasonable. After all of the furnaces have been tested, furnaces will be selected at random for testing every 36 months.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 013 Furnaces with Heat Recuperation**

Associated Items:

CE 025 Centrifugal Collector - High Efficiency
CE 026 Wet Scrubber-High Efficiency w/o Lime
CE 028 Centrifugal Collector - High Efficiency
CE 029 Wet Scrubber-High Efficiency w/o Lime
CE 031 Centrifugal Collector - High Efficiency
CE 032 Wet Scrubber-High Efficiency w/o Lime
CE 034 Centrifugal Collector - High Efficiency
CE 035 Wet Scrubber-High Efficiency w/o Lime
CE 037 Centrifugal Collector - High Efficiency
CE 038 Wet Scrubber-High Efficiency w/o Lime
CE 040 Centrifugal Collector - High Efficiency
CE 041 Wet Scrubber-High Efficiency w/o Lime
CE 042 Centrifugal Collector - High Efficiency
CE 043 Wet Scrubber-High Efficiency w/o Lime
CE 045 Centrifugal Collector - High Efficiency
CE 046 Wet Scrubber-High Efficiency w/o Lime
CE 048 Centrifugal Collector - High Efficiency
CE 049 Wet Scrubber-High Efficiency w/o Lime
CE 051 Centrifugal Collector - High Efficiency
CE 052 Wet Scrubber-High Efficiency w/o Lime
CE 054 Centrifugal Collector - High Efficiency
CE 055 Wet Scrubber-High Efficiency w/o Lime
CE 057 Centrifugal Collector - High Efficiency
CE 058 Wet Scrubber-High Efficiency w/o Lime
EU 034 A-2 furnace top gas
EU 036 A-4 furnace top gas
EU 038 B-2 furnace top gas
EU 040 B-4 furnace top gas
EU 042 C-2 furnace top gas
EU 044 C-4 furnace top gas
EU 045 D-1 furnace top gas
EU 047 D-3 furnace top gas
EU 049 E-1 furnace top gas
EU 051 E-3 furnace top gas
EU 053 F-1 furnace top gas
EU 055 F-3 furnace top gas
SV 027
SV 029
SV 031
SV 033
SV 035
SV 037
SV 038
SV 040
SV 042

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Associated Items: SV 044

SV 046

SV 048

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 3
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 2.00 lbs/million Btu heat input using 3-hour Average .	Minn. R. 7011.0610, subp. 2(B)
Sulfur Content of Fuel: less than or equal to 1.88 percent by weight assuming there is no sulfur off gased from the raw materials. The sulfur content of the process raw materials (ore, binder, etc) must also be taken into account and a mass balance of sulfur shall be calculated. The mass balance must be used to determine a fuel sulfur weight percentage that will comply with Minn. R. 7011.0610 subp. 2(B).	Minn. R. 7011.0800, subp. 2
The Permittee shall record the amount of fuel oil burned each day. The amount of natural gas consumed each calendar month shall be recorded no later than the 15th day of the following month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the permittee shall sample the fuel oil from the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The permittee shall analyze the oil sample to determine sulfur content of the fuel oil in percent by weight in accordance with the current ASTM method. The permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow (for scrubbers only): Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure guage, water flow rate meter or scrubber liquid pump KW usage. Scrubber liquid pump KW usage can only be used if the Permittee is able to develop a relaible relationship between KW usage and proper liquid flow. Once the scrubber water pressure, flow rate or KW usage ranges have been established they become an enforceable part of this permit. A deviation from the scrubber water pressure, flow rate, or KW usage 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; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Permit Issuance on one representative furnace to measure SO2, PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test on 2 representative furnaces to measure PM and Opacity emissions. The testing shall rotate between SV027, 037, 038 and 048.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 014 Transfer house and stacker transfer**

Associated Items: CE 116 Wet Scrubber-High Efficiency w/o Lime

CE 117 Wet Scrubber-High Efficiency w/o Lime

EU 126 Transfer House Conveyor

EU 127 Stacker Transfer Conveyor

SV 106

SV 107

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,460 days after Permit Issuance on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 015 Pellet Screening and Handling**

Associated Items: CE 105 Wet Scrubber-High Efficiency w/o Lime

CE 106 Wet Scrubber-High Efficiency w/o Lime

CE 107 Wet Scrubber-High Efficiency w/o Lime

CE 134 Wet Scrubber-High Efficiency w/o Lime

CE 135 Wet Scrubber-High Efficiency w/o Lime

CE 136 Wet Scrubber-High Efficiency w/o Lime

CE 137 Wet Scrubber-High Efficiency w/o Lime

CE 138 Wet Scrubber-High Efficiency w/o Lime

EU 108 Pellet Screening & Handling 1

EU 109 Pellet Screening & Handling 1

EU 110 Pellet Screening & Handling 2

EU 111 Pellet Screening & Handling 2

EU 112 Pellet Screening & Handling 3

EU 113 Pellet Screening & Handling 3

EU 114 Pellet Screening & Handling 4

EU 115 Pellet Screening & Handling 4

SV 094

SV 095

SV 096

SV 097

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 1 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 1.	Minn. R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Gas stream pressure gauge and scrubber water pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due before end of each 60 months starting 03/31/2000 on one (1) representative stack to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 020 East Fine Crushing**

Associated Items: CE 011 Wet Scrubber-High Efficiency w/o Lime

CE 120 Wet Scrubber-High Efficiency w/o Lime

CE 121 Wet Scrubber-High Efficiency w/o Lime

EU 015 Fine Crushing - East 1

EU 016 Fine Crushing - East 2

EU 017 Fine Crushing - East 3

SV 013

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance to measure PM and Opacity emissions on GP020 or GP021. A test for one of these groups will suffice for both groups.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2
D. RECORD KEEPING AND REPORTING - TEST CRUSHER	hdr
Record Keeping: The permittee shall retain on-site records of the hours of operation and throughput of the test crusher line located in tertiary crushing bay East 4. A record shall be made on each day that the crusher line is operated.	Minn. R. 7007.0800, subp. 5
Report: due 30 days after end of each calendar half-year starting 12/31/2000, a report on the status of the test crusher and a summary of the hours of operating and throughput recorded during the preceding half year. Any deviations from the requirements of 40 CFR Section 60, Subpart LL, shall be included within the semi-annual deviations report required to be submitted for this facility.	Minn. R. 7007.0800, subp. 6

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 021 West Fine Crushing**

Associated Items: CE 012 Wet Scrubber-High Efficiency w/o Lime

CE 122 Wet Scrubber-High Efficiency w/o Lime

CE 123 Wet Scrubber-High Efficiency w/o Lime

CE 124 Wet Scrubber-High Efficiency w/o Lime

EU 018 Fine Crushing - West 1

EU 019 Fine Crushing - West 2

EU 020 Fine Crushing - West 3

EU 021 Conveyors & Transfer Points

SV 014

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 730 days after Permit Issuance to measure PM and Opacity emissions on GP020 or GP021. A test for one of these groups will suffice for both groups.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 030 Loading Pocket Pellet Transfer & Handling**

Associated Items: CE 114 Wet Scrubber-High Efficiency w/o Lime

CE 115 Wet Scrubber-High Efficiency w/o Lime

EU 122 Loading Pocket Pellet Transfer & Handling

EU 123 Loading Pocket Chute

EU 124 Loading Pocket Bin 2

EU 125 Loading Pocket loadout

SV 104

SV 105

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 1,095 days after Permit Issuance to measure PM and Opacity emissions from one representative stack.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 032 G-1, G-3 and H-1 furnaces**

Associated Items: CE 060 Centrifugal Collector - High Efficiency

CE 061 Centrifugal Collector - High Efficiency

CE 062 Centrifugal Collector - High Efficiency

CE 087 Wet Scrubber-High Efficiency w/o Lime

CE 125 Centrifugal Collector - High Efficiency

EU 057 G-1 furnace top gas

EU 058 G-1 furnace discharge conveyor

EU 059 G-3 furnace top gas

EU 060 H-1 furnace top gas

EU 085 H-1 furnace discharge conveyor

EU 135 G-3 furnace discharge conveyor

SV 050

SV 051

SV 052

SV 077

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0610, subp. 1(A)(1); Minn. R. 7011.0710, subp. 3
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 2.00 lbs/million Btu heat input using 3-hour Average . This applies seperately to EU057, EU059 and EU060.	Minn. R. 7011.0610, subp. 2(B)
Sulfur Content of Fuel: less than or equal to 1.88 percent by weight assuming there is no sulfur off gased from the raw materials. The sulfur content of the process raw materials (ore, binder, etc) must also be taken into account and a mass balance of sulfur shall be calculated. The mass balance must be used to determine a fuel sulfur weight percentage that will comply with Minn. R. 7011.0610 subp. 2(B). This applies seperately to EU057, EU059 and EU060.	Minn. R. 7011.0800, subp. 2
The Permittee shall record the amount of fuel oil burned each day for EU057, EU059 and EU060. The amount of natural gas consumed each calendar month shall be recorded no later than the 15th day of the following month. The Permittee shall obtain and maintain a fuel supplier certification of the sulfur weight percent for each shipment of fuel oil. If supplier certification is not available, the permittee shall sample the fuel oil from the tank(s) after each delivery but not more than once each calendar week when multiple deliveries are made. The permittee shall analyze the oil sample to determine sulfur content of the fuel oil in percent by weight in accordance with the current ASTM method. The permittee shall maintain records of the fuel deliveries and results of the fuel analysis.	Minn. R. 7007.0800, subp. 4(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Gas stream pressure gauge and scrubber water pressure gauge Equipment Installation: due 30 days after Resuming Operation	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Resuming Operation to measure PM and Opacity emissions. Each furnace shall be tested within 180 days of resuming operation.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 100 Boilers #3 and #4**

Associated Items: EU 001 Boiler #3

EU 002 Boiler #4

SV 001

What to do	Why to do it
Standard for sulfur dioxide. The owner or operator of an affected facility that combusts oil shall burn oil having a Sulfur Content of Fuel: less than or equal to 0.5 percent by weight	40 CFR Section 60.42c(d) and Minn. R. 7011.0570
For affected facilities with distillate oil-fired units with heat input capacities between 10 and 100 million BTU per hour, monitoring for fuel oil sulfur limits under this section may be determined based on a certification from the fuel supplier as described under 40 CFR Section 60.48c(f)(1).	40 CFR Section 60.42c(h) and Minn. R. 7011.0570
Standard for particulate matter. No owner or operator of an affected facility shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for on 6-minute period per hour of not more than 27 percent opacity. Opacity: greater than or equal to 20 percent opacity	40 CFR Section 60.43c(c) and Minn. R. 7011.0570
Monitoring for sulfur dioxide. For affected facilities where the owner or operator seeks to monitor for the SO2 standards with fuel supplier certification, the initial performance test shall consist of the certification, as described under 40 CFR Section 60.48c(f)(1).	40 CFR Section 60.44c(h) and Minn. R. 7011.0570
Monitoring for particulate matter. The owner or operator of an affected facility subject to the PM and/or opacity standards shall conduct an initial performance test as required under 40 CFR Section 60.8 and shall conduct subsequent performance tests as requested by the Administrator.	40 CFR Section 60.45c(a) and Minn. R. 7011.0570
The quarterly reports shall include the following information: 1) Calendar dates covered in the report. 2) Copies of the fuel supplier certifications described under 40 CFR Section 60.43c(f)(1) and a certified statement signed by the owner or operator that the records of fuel supplier certifications submitted represent all of the fuel combusted during the quarter.	40 CFR Section 60.48c(e) and Minn. R. 7011.0570
Fuel supplier certification for distillate oil shall include the following information: i) The name of the oil supplier; and ii) A statement from the supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR Section 60.41c.	40 CFR Section 60.48c(f)(1) and Minn. R. 7011.0570
The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day.	40 CFR Section 60.48c(g) and Minn. R. 7011.0570
Fuel Usage: less than or equal to 6.7 million gallons/year using 365-day Rolling Sum (Distillate Oil Usage): This limit applies to the combined usage of distillate oil by both EU001 and EU002	Title I Condition: Limit to remain a minor modification under 40 CFR Section 52.21
Each day, calculate and record the sum of the distillate oil used in the previous 365 consecutive days.	Title I Condition: Monitoring for limit to remain a minor modification under 40 CFR Section 52.21

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 101 Furnace Discharge Conveyors**

Associated Items:

CE 063 Wet Scrubber-High Efficiency w/o Lime
CE 064 Wet Scrubber-High Efficiency w/o Lime
CE 065 Wet Scrubber-High Efficiency w/o Lime
CE 066 Wet Scrubber-High Efficiency w/o Lime
CE 067 Wet Scrubber-High Efficiency w/o Lime
CE 068 Wet Scrubber-High Efficiency w/o Lime
CE 069 Wet Scrubber-High Efficiency w/o Lime
CE 070 Wet Scrubber-High Efficiency w/o Lime
CE 071 Wet Scrubber-High Efficiency w/o Lime
CE 072 Wet Scrubber-High Efficiency w/o Lime
CE 073 Wet Scrubber-High Efficiency w/o Lime
CE 074 Wet Scrubber-High Efficiency w/o Lime
CE 075 Wet Scrubber-High Efficiency w/o Lime
CE 076 Wet Scrubber-High Efficiency w/o Lime
CE 077 Wet Scrubber-High Efficiency w/o Lime
CE 078 Wet Scrubber-High Efficiency w/o Lime
CE 079 Wet Scrubber-High Efficiency w/o Lime
CE 080 Wet Scrubber-High Efficiency w/o Lime
CE 081 Wet Scrubber-High Efficiency w/o Lime
CE 082 Wet Scrubber-High Efficiency w/o Lime
CE 083 Wet Scrubber-High Efficiency w/o Lime
CE 084 Wet Scrubber-High Efficiency w/o Lime
CE 085 Wet Scrubber-High Efficiency w/o Lime
CE 086 Wet Scrubber-High Efficiency w/o Lime
EU 061 A-1 furnace discharge conveyor
EU 062 A-2 furnace discharge conveyor
EU 063 A-3 furnace discharge conveyor
EU 064 A-4 furnace discharge conveyor
EU 065 B-1 furnace discharge conveyor
EU 066 B-2 furnace discharge conveyor
EU 067 B-3 furnace discharge conveyor
EU 068 B-4 furnace discharge conveyor
EU 069 C-1 furnace discharge conveyor
EU 070 C-2 furnace discharge conveyor
EU 071 C-3 furnace discharge conveyor
EU 072 C-4 furnace discharge conveyor
EU 073 D-1 furnace discharge conveyor
EU 074 D-2 furnace discharge conveyor
EU 075 D-3 furnace discharge conveyor
EU 076 D-4 furnace discharge conveyor
EU 077 E-1 furnace discharge conveyor
EU 078 E-2 furnace discharge conveyor
EU 079 E-3 furnace discharge conveyor
EU 080 E-4 furnace discharge conveyor
EU 081 F-1 furnace discharge conveyor

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Associated Items: EU 082 F-2 furnace discharge conveyor

EU 083 F-3 furnace discharge conveyor

EU 084 F-4 furnace discharge conveyor

SV 053

SV 054

SV 055

SV 056

SV 057

SV 058

SV 059

SV 060

SV 061

SV 062

SV 063

SV 064

SV 065

SV 066

SV 067

SV 068

SV 069

SV 070

SV 071

SV 072

SV 073

SV 074

SV 075

SV 076

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 1 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 1.	Minn. R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
C. PERFORMANCE TESTING REQUIREMENTS	hdr
Initial Performance Test: due before end of each 60 months starting 03/31/2000 on two (2) representative discharge conveyor stacks to measure PM and Opacity emissions.	Minn. R. 7017.2020, subp. 1
Performance Test Notification (Written): due 30 days before each performance test.	Minn. R. 7017.2030, subp. 1
Performance Test Plan: due 30 days before each performance test.	Minn. R. 7017.2030, subp. 2 and 3
Performance Test Pre-Test Meeting: due 7 days before each performance test.	Minn. R. 7017.2030, subp. 4
Performance Test Report: due 45 days after each performance test.	Minn. R. 7017.2035, subp. 1 and 2
Performance Test Report - Microfiche Copy: due 105 days after each performance test.	Minn. R. 7017.2035, subp. 2

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 102 Fine Crushing - West 4**

Associated Items: CE 010 Wet Scrubber-High Efficiency w/o Lime

CE 119 Wet Scrubber-High Efficiency w/o Lime

EU 013 Vibrating Feeders & Converyors

EU 014 Fine Crushing - West 4

SV 012

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 103 Secondary Crushing & South Pan Feeder**

Associated Items: CE 006 Wet Scrubber-High Efficiency w/o Lime

CE 118 Wet Scrubber-High Efficiency w/o Lime

EU 008 Secondary Crushing - South 3

EU 009 South Pan Feeder

SV 008

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 104 North & South Transfer Points**

Associated Items: CE 013 Wet Scrubber-High Efficiency w/o Lime

CE 014 Wet Scrubber-High Efficiency w/o Lime

EU 022 North Transfer Point

EU 023 South Transfer Point

SV 015

SV 016

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 105 Coarse Ore Storage**

Associated Items: CE 139 Wet Scrubber-High Efficiency w/o Lime

CE 140 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 141 Wet Scrubber-High Efficiency w/o Lime

CE 142 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 136 Coarse Ore Storage

SV 111

SV 112

SV 113

SV 114

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 106 North & South Chip Circuits**

Associated Items: CE 110 Wet Scrubber-High Efficiency w/o Lime

CE 111 Wet Scrubber-High Efficiency w/o Lime

EU 118 North Chips Circuit

EU 119 South Chips Circuit

SV 100

SV 101

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 1 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 1.	Minn R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 107 North & South Pellet Elevators**

Associated Items: CE 108 Wet Scrubber-High Efficiency w/o Lime

CE 109 Wet Scrubber-High Efficiency w/o Lime

EU 116 North Pellet Elevator

EU 117 South Pellet Elevator

SV 098

SV 099

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 1 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 1.	Minn. R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **GP 108 Fugitive Sources**

Associated Items:
FS 004 PM-10 Taconite, Drilling and Blasting
FS 005 PM-10 Taconite, Truck Load
FS 006 PM-10 Taconite, Truck Unload
FS 007 PM-10 Taconite, Rail Load
FS 008 PM-10 Taconite, Rail Unload
FS 009 PM-10 Pellets, Load
FS 013 PM-10 Waste Rock, Drilling and Blasting
FS 014 PM-10 Waste Rock, Truck Load
FS 015 PM-10 Waste Rock, Truck Unload
FS 016 PM-10 Tailings, Road Dust
FS 017 PM-10 Waste Rock, Road Dust
FS 020 PM-10 Pellets, Storage Pile
FS 021 PM-10 Tailings, Storage Pile
FS 022 PM-10 Waste Rock, Storage Pile
FS 023 PM-10 Taconite, Truck Transport
FS 028 PM-10 Waste Rock, Truck Transport
FS 029 PM-10 Chips, Loading
FS 032 PM-10 Tailings, Tailings Basin

What to do	Why to do it
Fugitive Control Plan: Comply with the Fugitive Control Plan. Follow the actions and recordkeeping specified in the Fugitive Control 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 Fugitive Control Plan, then the Permittee may be required to amend the Fugitive Control Plan. Prior to approval of the Fugitive Control Plan the Permittee shall observe fugitive emissions from FS005-007, FS009, FS014-FS017, FS020-023, FS028, FS029, and FS032 at least once daily when in operation and take corrective action to control emissions in excess of Minn. R. 7011.0150.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Compliance With Ambient Standards: Comply with the Fugitive Control Plan and apply best management practices in order to prevent exceedences of the ambient air standards in Minn. R. ch. 7009.	Minn. R. ch. 7009; Minn. R. 7011.0150

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 010 North Pan Feeder**

Associated Items: CE 007 Wet Scrubber-High Efficiency w/o Lime

SV 009

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 104 Bentonite Storage**

Associated Items: CE 100 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 090

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 105 Bentonite Silo North**

Associated Items: CE 101 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 091

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 106 Bentonite Conveyor**

Associated Items: CE 102 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 092

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 107 Bentonite Bin**

Associated Items: CE 103 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

SV 093

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 120 G & H Recycle Pellet System**

Associated Items: CE 112 Wet Scrubber-High Efficiency w/o Lime

SV 102

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 30 days after Resuming Operation	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE A: LIMITS AND OTHER REQUIREMENTS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

Subject Item: **EU 121 Chips Handling**

Associated Items: CE 113 Wet Scrubber-High Efficiency w/o Lime

SV 103

What to do	Why to do it
A. POLLUTANT LIMITS	hdr
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735.	Minn. R. 7011.0710, subp. 1(A)
Total Particulate Matter: greater than or equal to 85 percent collection efficiency or higher for the pollution control equipment, the entire emission facility is in compliance with NAAQS and MAAQS, and the emission facility is located not less than one-fourth mile from any residence or public roadway. (This is an alternative demonstration of compliance to Total Particulate Matter Limit.)	Minn. R. 7011.0710, subp. 3
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity	Minn. R. 7011.0710, subp. 1(B)
B. POLLUTION CONTROL EQUIPMENT REQUIREMENTS	hdr
Comply with Step 1 of the supplemental environmental project required by the May 20, 1999, stipulation agreement, as amended. The Permittee shall submit to the MPCA an updated facility description and potential to emit calculations within 60 days of completion of Step 1.	Minn. R. 7011.0710, subp. 1(A)
The Permittee shall submit a written notice to be received by the MPCA at least seven days prior to each replacement of air pollution control equipment that has an equivalent or better removal efficiency than the equipment being replaced. The Permittee and the MPCA will attach a copy of the notice to this permit.	Minn. R. 7007.1150(C)
Gas Stream Pressure Drop: Upon installation of the pressure gauge, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. Once the pressure drop range has been established it becomes an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Scrubber Water Flow: Upon installation of the water flow sensor, monitor and record at least once each operating day, or on a four-hour block average basis if continuous monitoing instrumentation is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the established range shall trigger a corrective action as detailed in the O&M plan.	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Gas stream pressure gauge and scrubber water flow Equipment Installation: due 365 days after Permit Issuance	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)

TABLE B: SUBMITTALS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 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

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Fugitive Control Plan	due 90 days after Permit Issuance for review and approval by the Commissioner. The plan shall identify all fugitive emission sources, primary and contingent control measures and practices, and records kept. The plan must include at least daily monitoring of the fugitive sources identified in GP108. The plan will include a statement of objectives, fugitive emission sources, operating and control measures, dust suppressant application description, corrective actions, training, and records. The Commissioner may require additions or changes to the Fugitive Emission 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. For unpaved haul roads, the existing Unpaved Haul Road Fugitive Control Plan may be submitted for approval as part of the overall plan.	Total Facility
Operation and Maintenance Plan	due 120 days after Permit Issuance The Permittee shall provide an O&M plan for review and approval by the Commissioner. The O&M plan shall identify all air pollution control equipment, a preventative maintenance program for that equipment, description of corrective actions to be taken in the event of a malfunction or breakdown, description of the employee training program, and the records kept to demonstrate plan implementation. The Commissioner may require additions or changes to the O&M plan when granting approval. The Permittee will be given an opportunity to comment on any required additions or changes to the plan before the Commissioner grants approval of the plan.	Total Facility
Testing Frequency Plan	due 90 days after Initial Performance Test required by this permit. Could be 1, 3, or 5 year intervals depending on the margin of compliance during the initial performance test required by this permit.	GP001, GP002, GP003, GP007, GP009, GP010, GP011, GP014, GP015, GP020, GP021, GP030, GP032, GP101
The Permittee shall complete monitoring equipment debugging and establishment of parameter ranges for normal operation of the air pollution control equipment. These ranges shall be provided, along with rationale for their development, in a permit amendment application submittal to incorporate the parameter ranges into this permit. The rationale for choosing these ranges shall include the control equipment manufacturer's suggested ranges and any reasons for deviating from the recommended ranges. The permit amendment application is due 180 days after resuming operation. Submittal	due 180 days after Resuming Operation	EU120, GP010, GP032

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

The Permittee shall complete monitoring equipment debugging and establishment of parameter ranges for normal operation of the air pollution control equipment. These ranges shall be provided, along with rationale for their development, in a permit amendment application submittal to incorporate the parameter ranges into this permit. The rationale for choosing these ranges shall include the control equipment manufacturer's suggested ranges and any reasons for deviating from the recommended ranges. The permit amendment application is due 540 days after permit issuance. Submittal	due 540 days after Permit Issuance	EU010, EU104, EU105, EU106, EU107, EU121, GP001, GP002, GP003, GP007, GP009, GP011, GP012, GP013, GP014, GP015, GP020, GP021, GP030, GP101, GP102, GP103, GP104, GP105, GP106
The Permittee shall complete monitoring equipment debugging and establishment of parameter ranges for normal operation of the air pollution control equipment. These ranges shall be provided, along with rationale for their development, in a permit amendment application submittal to incorporate the parameter ranges into this permit. The rationale for choosing these ranges shall include the control equipment manufacturer's suggested ranges and any reasons for deviating from the recommended ranges. The permit amendment application is due 540 days after permit issuance. Submittal	due 540 days after Permit Issuance	GP107

TABLE B: RECURRENT SUBMITTALS

12/21/00

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009 - 001

What to send	When to send	Portion of Facility Affected
Quarterly Report	due 30 days after end of each calendar quarter following Permit Issuance. The Permittee shall submit quarterly reports that contain the applicable sulfur dioxide monitoring information required by 40 CFR Section 60.48c(e).	EU001
Quarterly Report	due 30 days after end of each calendar quarter following Permit Issuance. The Permittee shall submit quarterly reports that contain the applicable sulfur dioxide monitoring information required by 40 CFR Section 60.48c(e).	EU002
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance . The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner, and to the U.S. EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

APPENDIX MATERIAL

Facility Name: LTV Steel Mining - Hoyt Lakes

Permit Number: 13700009-001

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

Appendix B – Visible Emissions Checklist

Appendix C – Insignificant Activities (Required to be Listed)

APPENDIX B

VISIBLE EMISSION CHECKLISTS

Daily Stack Emissions Inspection

Emission Units and Stack/Vents:
Visible Emissions Checklist(s): The Permittee shall use one or more checklists that contain SV003 & SV004 (GP001) 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

VISIBLE EMISSION CHECKLISTS

Daily Stack Emissions Inspection

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 moisture plume limits visible emissions observations.
If the unit is down for more than one hour and the service area is active, notify the Environmental
Engineer with the following information: Unit number, time it went down, why it went down, and when it is expected to be operating again.
At the end of each week, send completed inspection form to Environmental Engineer to file.

EU	GP	SV	Sys #	Service Area	Sat	Sun	Mon	Tue	Wed	Thu	Fri
		003									
		004									
				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 _____ # _____

APPENDIX C

Insignificant Activities
(Required to be Listed)

SV	EU	Emission Unit Description	Basis
		Space Heaters in Area #1 fueled by natural gas	MN Rules 7007.1300, subp.3, A
		Equipment used exclusively for forging or extruding hot metals	MN Rules 7007.1300, subp.3, C
		Laboratory for testing and analysis of substances for QA/QC purposes	MN Rules 7007.1300, subp.3, G
		Miscellaneous welding equipment used for maintenance purposes	MN Rules 7007.1300, subp.3, H(4)
		Blueprint copier in the drafting department	MN Rules 7007.1300, subp.3, H(5)
		Storage tank	MN Rules 7007.1300, subp.4
		Three zinc pots for maintenance of crusher linings	MN Rules 7007.1300, subp.4
108	128	Back-up generator #1	MN Rules 7007.1300, subp.4
109	129	Back-up generator #2	MN Rules 7007.1300, subp.4
110	130	Area 2 Shop Boiler	MN Rules 7007.1300, subp.4

The following are associated with fugitive sources (FS):		
FS	**Fugitive Source Description**	**Basis**
001	Surface overburden, truck load	MN Rules 7007.1300, subp. 4
002	Surface overburden, truck unload	MN Rules 7007.1300, subp. 4
018	Chips, truck load	MN Rules 7007.1300, subp. 4
019	Chips, truck unload	MN Rules 7007.1300, subp. 4
020	Chips, storage pile wind erosion	MN Rules 7007.1300, subp. 4
021	Chips, railcar load	MN Rules 7007.1300, subp. 4
033	Pellets, screening	MN Rules 7007.1300, subp. 4

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13700009-001

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

1. General Information

1.1. Applicant and Stationary Source Location:

Owner and Operator Address and Telephone Number	Facility Address (SIC Code: 1011)
LTV Steel Mining Company P.O. Box 847 Hoyt Lakes, MN 55750 Contact: James R. Scott (218) 225-4217	County Road 666 Hoyt Lakes, Minnesota St. Louis County

1.2. Description of the facility:

LTV Steel Mining Company has announced its intent to close the facility in the summer of 2001. This permit will apply to the facility while the facility continues to operate and will continue to be in effect until the permit is voided by the MPCA in accordance with Minn. R. 7007.1050, subpart 7. Should the facility or part of the facility be transferred to a new owner, the permit may be administratively amended to transfer the permit to the new owner in accordance with Minn. R. 7007.1400, subp. E, provided that the scope of operations will not change significantly.

LTV Steel Mining Company owns and operates a taconite pellet production plant. There are three main areas where emissions are created: the mine, tailings basin and plant. Emissions from the mine are fugitive in nature and are created from blasting, coarse ore loading and unloading, overburden loading and unloading and haul truck traffic on unpaved roads. These emissions are primarily Particulate Matter (PM) and Particulate Matter less than 10 microns (PM_{10}).

Emissions from the tailings basin are fugitive in nature and are created by tailing basin dike construction, truck traffic on unpaved roads and wind erosion of exposed tailings beaches and are primarily PM and PM_{10}. Emissions from the plant consist of point source emissions from crushing, concentrating, and agglomerating operations which primarily create PM and PM_{10} emissions.

LTV has 27 vertical shaft induration furnace that creates emissions of PM, PM_{10}, Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_X), Carbon Monoxide (CO) and non-criteria pollutants such as Hazardous Air Pollutants (HAPs). HAPs emissions tend to be metals and products of combustion. Fugitive emissions from the plant are PM and PM_{10} from pellet loadout, conveying, stockpiling, and wind erosion of fine particles from the pellet storage piles.

LTV Steel Mining Company uses a variety of multiclones, baghouses and wet scrubbers to control emissions from the point sources located in the plant. Water and chemical dust suppressants are applied to haul roads and other fugitive sources to reduce PM and PM_{10} emissions when weather permits.

1.3 Description of any changes allowed with this permit issuance

The Title V permit references the Minor Amendment permit application dated April 28, 1999, in which LTV proposed installation of a test crusher line in the vacant bay of tertiary crushing line East-4 (GP020). At this time, it appears unlikely that LTV will purchase the unit for permanent installation since LTV has been unable to achieve consistent production through the test unit and actual days of operation have been limited. However, LTV may consider an assessment of alternate equipment in the same location. The permit will require periodic updates on the operational status and compliance status of the test unit so that the MPCA may continue to evaluate permitting implications. The unit is subject to NSPS subp. LL. A performance test pursuant to 40 CFR section 60.8 was conducted on May 25, 2000, and the unit will have to be operated in compliance with the wet scrubber operational range established by the NSPS based on test data. This limit will be established in the performance test review letter pursuant to Minn. R. 7017.2025, subp. 3. Preliminary results from the May 25, 2000, test indicate a PM concentration of 0.0033 gr/dscf, which is below the NSPS standard of 0.0218 gr/dscf.

The following table shows emissions as calculated for the minor permit modification application, updated to reflect the May 25, 2000, performance test. This May 25, 2000, performance test was conducted at operating capacity and yielded a PM/PM_{10} emission factor of 1.3 lb/hr. This translates to a maximum controlled, unlimited emission level of 5.7 tons per year, which is below the PSD significance levels for PM and PM10 (25 and 15 tons per year respectively). This is further summarized below:

Pollutant	Max. Controlled, Unlimited Emissions	PSD Significance Level
PM	5.7 tpy	25 tpy
PM_{10}	5.7 tpy	15 tpy
SO2	0.0 tpy	40 tpy
NOx	0.0 tpy	40 tpy
VOC	0.0 tpy	40 tpy
CO	0.0 tpy	100 tpy

Based on PM/PM_{10} and VOC emission levels, this modification is not major under 40 CFR pt. 63. However, this source would likely be included in the pending federal MACT standard for this industry category.

1.4 Description of all amendments issued since the issuance of the last total facility permit and to be included in the Part 70 Permit.

LTV Steel Mining Company was constructed in phases beginning in 1956 with the last of the furnaces being installed in 1967. LTV Steel was issued a total facility operating permit (48B-72-O-1) in 1972. The following are the most recent permits issued to LTV Steel Mining Company.

Permit Number and Issuance Date	Action Authorized
48B-93-I/O-4	Installation and operation permit for two natural gas boilers.
48B- 95-I/O-1	Installation and operation permit for the raised air louvers pollution control project.

The 1993 construction permit established the Title I conditions that are reflected at the FC and GP100 levels of the Title V permit. This action authorized the installation of two natural gas fired boilers (with distillate oil backup) to replace two coal fired boilers, which the permit required to be decommissioned after the 1993/94 heating season. The coal fired boilers had been permitted under air emission permit number 48B-82-O-3. Replacement of the boilers was prompted in part by a failed opacity test on Boiler #2 on March 25, 1993, and the need for extensive repairs on both Boiler #1 and #2.

1.5 Permit Application Materials:

The Permittee submitted the following permit applications (with dates as marked, NOT as received by MPCA):

Submittal	Dated	Key Information
Original Application	January 5, 1995	Complete Application
Supplemental Application	July 13, 1995	Complete Application
Minor Amendment Application	April 28, 1999	Complete Application

In addition to this application, there was supplemental information submitted in the form of faxes and additional mailings.

1.6. Facility Emissions:

See Attachment 1 of this Technical Support Document (TSD) for further details on the emissions from specific emissions units (Emissions Summary).

Table 1. Total Facility Potential to Emit (PTE) Summary and Attainment Status:

	PM Tpy	PM_{10} Tpy	SO2 Tpy	NOx Tpy	CO Tpy	VOC Tpy	Pb Tpy	Single HAP Tpy**	All HAPs Tpy**
Total Facility Limited Potential Emissions*	57,254	23,523	4551	4981	771	235	0.01	NA	NA
Total Facility Actual Emissions*	5668	3196	1004	693	249	24	<0.01	95.3	169

*Limited potential emissions from the GI-07 form in the January 1995 permit application. Actual emissions are based on the permit application where the data is available, performance tests and the preliminary 1998 emission inventory. The above PM and PM_{10} actual emission totals do not include fugitive emissions, the potential emissions totals do include fugitives. Current actual emissions of PM and PM_{10} may be lower now due to ongoing control equipment upgrades. The Permit will require that updated PTE numbers be submitted upon completion of the referenced upgrades.

**HAP emissions based on the report, "Taconite Iron Ore Industry in the United States" dated December 30, 1999, submitted to EPA by Hongming Jiang, MPCA, in support of taconite MACT development. The single largest HAP is hydrogen fluoride. While the hydrogen chloride and hydrogen fluoride emissions estimates may be high, since they are based on emissions data for other facilities, the MPCA believes that the data demonstrates LTV to be a major source for HAPs.

Table 2. Facility and Permit Classification

Classification	Major/Affected Source	*Minor with Limits	*Minor
PSD (Prevention of Significant Deterioration)	PM, PM_{10}, NOx, SO2, CO		
NAAR (Nonattainment Area Review)	NA	NA	NA
Part 70 Permit Program	X		
Part 63 NESHAP (National Emissions Standards for Hazardous Air Pollutants for Source Categories)	X		

* Refers to potential emissions that are less than those specified as major by 40 CFR 52.21, 40 CFR pt. 51 Appendix S, 40 CFR pt. 70, and 40 CFR pt. 63.

** LTV is considered a major source for HAPs with respect to the pending federal MACT standard for the industry. However, a facility may, until the compliance date of the promulgated standard, become a synthetic minor source for HAPs.

1.7 Ongoing Air Pollution Control Equipment Upgrades

LTV is in the process of upgrading several pieces of air pollution control equipment. In general, older mechanical collectors are being replaced by new wet scrubber devices. Some of these changes are required by the May 20, 1999, air quality Stipulation Agreement, as amended, while the rest are voluntary. Some work has already been completed but the schedule has changed following LTV's recent announcement that the facility will close in the Summer of 2001. The changes, as originally scheduled, are summarized below:

For the voluntary Coarse Ore Storage/Fine Crusher changes, all collectors are purchased and were scheduled for installation in the year 2000, with all work to be complete by 3/31/2001. This voluntary changeout for the coarse ore storage/fine crusher area collectors is replacing primarily type W Rotoclones with all Clean Gas System multi-venturi scrubbers. The air flow will remain the same, or be slightly increased, by replacement of smaller collectors with larger multi-venturi scrubbers. Coarse Ore Storage total air flow will increase from 35,200 SCFM to 48,000 SCFM. Fine Crushing air flow will remain the same.

1) Coarse Ore Storage

Emission unit	Control Equipment	Stack
EU 136	CE 139-142	SV 111-114

Will be revised to

Emission unit	Control Equipment	Stack
EU 136	CE 139, CE 141	SV 111, SV 113

2) Fine Crushing

Emission unit	Control Equipment	Stack
EU 015-017	CE 011, 120, 121	SV 013
EU 014, 013	CE 010, 119	SV 012
EU 018-021	CE 012, 122, 123, 124	SV 014

Has already been revised to

Emission unit	Control Equipment	Stack
EU 015-017	CE 011, 120, 121	SV 013
EU 014, 018	CE 010, 012	SV 012
EU 019-021	CE 122, 123, 124	SV 014

3) Pellet Plant: The following changes were planned for the pellet plant, as specified by the May 20, 1999, Stipulation Agreement, as amended. The twelve furnace discharge conveyor rotoclone collectors on furnaces with heat recuperation were scheduled to be replaced one for one with twelve multi-venturi scrubbers, and thirteen auxiliary rotoclone collectors were scheduled to be replaced with twelve multi-venturi scrubbers. The other twelve furnace discharge conveyor rotoclone collectors (on furnaces without heat recuperation) were to be replaced with multi-venturi scrubbers as Phase Two of the Stipulation Agreement.

Nine furnace discharge conveyor rotoclones were replaced with nine multi-venturi scrubbers prior to Amendment Number 3 to the May 20, 1999, Stipulation Agreement being requested. The amendment requested by LTV was for suspension of requirements for installation of remaining air pollution control equipment following the announced permanent shutdown scheduled for the summer of 2001.

The thirteen auxiliary rotoclone were replaced with twelve multi-venturi scrubbers as follows:

- The eight rotoclone pellet screening and handling collectors were replaced one for one with eight multi-venturi scrubbers.
- The one rotoclone North Pellet Elevator & Storage Bin collector was replaced with one multi-venturi scrubber.
- The two rotoclones North and South Chips Elevators were replaced with two multi-venturi scrubbers. The South Pellet Elevator & Storage Bins (EU117) was tied into both the North and South Chips Elevators multi-venturi scrubbers to make full time operation available.
- The one rotoclone Chips Handling Collector was replaced with one multi-venturi scrubber.

Emission unit	Control Equipment	Stack
EU 116	CE 108	SV 098
EU 117	CE 109	SV 099
EU 118	CE 110	SV 100
EU 119	CE 111	SV 101
EU 121	CE 113	SV 103

Has been revised to:

Emission unit	Control Equipment	Stack
EU 116	CE 108	SV 098
EU 117 & 118	CE 110	SV 100
EU 117 & 119	CE 111	SV 101
EU 121	CE 113	SV 103

In total, 47 Pellet Plant collectors, primarily rotoclones, were scheduled to be replaced by 46 multi-venturi scrubbers, all prior to January 31, 2003. 34 of the collectors being shut down and replaced were units required to be replaced by the stipulation agreement, 13 others were strictly voluntary.

2. Regulatory Overview of Facility

LTV Steel Mining Company is a major source as defined under 40 CFR § 52.21, 40 CFR pt. 63 and 40 CFR pt. 70.

Table 3. Regulatory Overview

FC, EU, GP, or SV*	Applicable Regulations	Comments:
EU033-056 (GP012)	Minn. R. 7007.0610	Standards of Performance for Fossil Fuel Burning Direct Heating Equipment. Emissions of particulate matter, SO2 and opacity are regulated by this standard.
	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)	Permit Content rules for Title V operating permits that pertain to the monitoring and operation of the emission unit and control equipment. The requirements in this permit meet the requirements of EPA's periodic monitoring guidance, which was issued in fall of 1998.
	Minn. R. ch. 7017	Performance Tests. Test in accordance with the rules using EPA approved test methods.
GP001 GP002 GP003 GP007-011 GP014-015 GP020-021 GP030 GP032 GP101 – 108 EU010 EU104-107 EU120-121	Minn. R. 7007.0715	Standards of Performance for Post 1969 Industrial Process Equipment. Emissions of particulate matter and opacity are regulated by this standard.
	Minn. R. 7007.0800, subp. 4(D); Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)	Permit Content rules for Title V operating permits that pertain to the monitoring and operation of the emission unit and control equipment. The requirements in this permit meet the requirements of EPA's periodic monitoring guidance, which was issued in fall of 1998.
	Minn. R. ch. 7017	Performance Tests. Test in accordance with the rules using EPA approved test methods.
GP100	40 CFR § 60.40 to 60.48	New Source Performance Standards for Fossil Fuel Fired Steam Generators
	Minn. R. 7011.0570	
FC	40 CFR § 70.2	Part 70 Operating Permit Program.
	Minn. R. 7007.0800, subp. 2 , Minn. R. ch. 7009	Ambient Air Quality Standards. The permit contains a state only requirement for the facility to submit dispersion modeling for PM_{10} and SO2.

EU = emission unit, SV = stack/vent, GP = group, CE = control equipment, FC = facility

3. Technical Information

A. Periodic Monitoring

EPA has requested that operating parameters for air pollution control equipment be put into Title V permits. This approach is problematic, at least initially, for the taconite plants in Minnesota that do not yet have their Title V permits. Most of the plants were constructed in the 1950-1970s and none of the permits from this time period required periodic monitoring. For the vast majority of the control equipment at the affected plants there is no historic operating parameter data to use to develop operating parameter ranges that are indicative of proper control equipment operation. Periodic monitoring equipment has not been installed for the most of the air pollution control equipment. In some cases the control equipment vendors have gone out of business.

Instead of using arbitrary operating parameter ranges for control equipment classes (e.g. 1-10 inch pressure drop for baghouses) that do not reflect site specific conditions and may not catch control equipment failures that could lead to exceedences of emission limits, the MPCA proposes to allow LTV the opportunity to develop meaningful site specific operating parameter ranges. Since LTV is one of the largest PM_{10} emitters in Minnesota, the MPCA feels that it is particularly important to have meaningful site specific operating parameter ranges that will accurately indicate control equipment problems that may increase PM_{10} emissions.

To implement periodic monitoring for taconite plants in a meaningful way the MPCA has developed the following permit conditions for LTV:

<u>REQUIREMENTS FOR BAGHOUSES:</u>

1) Gas Stream Pressure drop: Monitor and record, on a four-hour block average basis, when in operation, once the pressure gauge is installed. Once the pressure drop parameter ranges for these units are established, a deviation from the range for any unit shall trigger a corrective action as detailed in the O&M plan.

   This is a continuous monitoring requirement and deviations will be reportable within the facility's semiannual deviations report.

2) Process monitoring: the visible emissions observer in the facility staff shall check stack visible emissions at least once daily using a checklist that at a minimum contains the information required in Appendix B. If the permittee uses a broken bag detector approved by the Agency then the Permittee does not need to conduct visible emissions checks.

Requirement (2) is a quick visible emissions (VE) check, not a full Method 9 opacity test. Appendix B requires corrective actions to be taken if abnormal visible emissions are observed. If a baghouse is operating correctly for SV003 and SV004 there should be no visible emissions present. The broken bag detector, if/when fitted, serves much the same purpose as the VE check.

LTV has requested the flexibility to use video cameras to perform the quick VE check for SV003 and SV004. Since the VE check is not used to get a numerical measure of opacity, but rather an indication if visible emissions are present, a video camera may a workable solution for SV003 and SV004. The MPCA is willing to allow LTV to use a video camera monitoring system for SV003 and SV004 provided the camera can be properly situated with sufficient resolution to detect visible emissions coming from the bag house venting through SV003 and SV004. Also the MPCA is willing to allow LTV to use broken bag detectors on the baghouses for SV003 and SV004 provided the Agency is satisfied that the broken bag detectors are effective. Broken bags are common causes of visible emissions from baghouses and broken bag detectors may be as effective as daily VE checks.

3) Pressure drop monitoring equipment installation due 365 days after permit issuance.

<u>REQUIREMENTS FOR SCRUBBERS:</u>

4) Gas Stream Pressure drop: Monitor and record, on a four-hour block average basis, when in operation, once the pressure gauge is installed. Once the pressure drop parameter ranges for these units are established, a deviation from the range for any unit shall trigger a corrective action as detailed in the O&M plan

This is a continuous monitoring requirement and deviations will be reportable within the facility's semiannual deviations report.

5) Scrubber Water Flow: Monitor and record at a minimum once daily when in operation once the scrubber water flow sensor is installed. The flow sensor can be either a pressure gauge or water flow rate meter. Once the scrubber water pressure or flow rate ranges have been established they become an enforceable part of this permit. A deviation from the scrubber water pressure or flow rate range shall trigger a corrective action as detailed in the O&M plan.

This is a continuous monitoring requirement and deviations will be reportable within the facility's semiannual deviations report.

The MPCA is requiring LTV to monitor the gas flow pressure drop and the water flow. Since the scrubber water at LTV can contain large amounts of abrasive particulate material, flow rate meters may not work well in all locations. The MPCA is requiring LTV to measure water flow or water pressure that indicates flow for each scrubber with the exact method to be determined by location constraints. While water pressure is a less desirable parametric monitoring method than water flow rate, the MPCA is allowing LTV to use either option since LTV will also be using gas flow pressure drop readings giving LTV two separate parametric means of determining if the wet scrubber is operating correctly.

6) Water flow rate and Pressure drop monitoring equipment installation due 365 days after permit issuance.

Since LTV has over 130 pieces of control equipment the installation of monitoring equipment is a considerable undertaking. The MPCA believes allowing LTV to phase in the installation of monitoring equipment between 180 and 365 days after permit issuance is reasonable.

REQUIREMENT FOR ALL CONTROL EQUIPMENT:

7) The Permittee shall complete monitoring equipment debugging and establishment of parameter ranges for normal operation of the air pollution control equipment. These ranges shall be provided, along with rationale for their development, in a permit amendment application submittal to incorporate the parameter ranges into this permit. The rationale for choosing these ranges shall include the control equipment manufacturer's suggested ranges and any reasons for deviating from the recommended ranges. Submittal due 540 days after Permit Issuance. [180 days after resuming operation, in the case of EU120, GP010 and GP032]

The permit amendment application submittal required by item (7) will give the MPCA meaningful site specific operating parameter ranges within eighteen months of permit issuance. LTV has over 130 pieces of control equipment, which justifies allowing 540 days to develop the ranges. Once we receive the permit amendment application submittal the MPCA will review it and make any necessary changes to ensure the use of meaningful operating parameter ranges. The permit will be amended accordingly. Requirement 1 for baghouses and requirements 4 and 5 for scrubbers will be amended to explicitly include the operating parameter ranges.

Note: the monitoring equipment deadlines given above do not apply to the new control equipment listed in Section 1.7 of this TSD. The MPCA expects that the monitoring devices will be installed at the same time as the new control equipment, as LTV Steel has been doing for the upgrades that have already been completed.

REQUIREMENT FOR FUGITIVE SOURCES:
The draft permit requires LTV to monitor significant dust sources at least daily. Based on plant operators' visual observations, corrective actions will be implemented according to the fugitive emissions control plan if significant fugitive dust emissions are observed.

B. Performance Testing

Performance testing is required for GP012 (induration furnaces without heat recoup) and GP013 (induration furnaces with heat recoup). Due to structural constraints with the induration furnace building's footings only 4 of the 24 stacks have flow straighteners and extended stacks to allow performance tests to be conducted. The MPCA has agreed to allow LTV to rotate the testing between the 4 furnaces that had extended stacks (SV027, SV037, SV038 and SV048). As long as there are no compliance problems indicated with these four units the MPCA would not require testing of the unequipped stacks. The MPCA reserves the right to require performance testing of one or more of the 20 unequipped stacks if it suspects compliance problems.

Some testing requirements are linked directly to the May 20, 1999, stipulation rather than detailing the requirement in the permit. This was done so that both documents would be current if the MPCA was to allow any amendment to the stipulation agreement in the future. Otherwise when determining which units were to be tested and the frequency at which to test the Agency used the following criteria:

- Has the emission unit or a like kind emission unit ever been tested? If no, then it or a like kind unit should be tested sometime during the life of the 5-year Title V permit.
- If the emission unit or a like kind emission unit has been tested in the past and it is less than 90 percent of the emission limit then test during the life of the 5-year Title V permit on a three or five year cycle, based on past emissions.
- If an emission unit based on the information in the Title V application has the possibility of exceeding an emission limit in the industrial process equipment rule then we want it tested sometime during the life of the 5-year Title V permit.
- In general, the larger the emissions from a unit the more likely we wanted it tested and wanted it tested earlier during the life of the Title V permit and more frequently.
- Like kind emission units and control equipment were grouped together to reduce the number of tests needed to produce a representative sample.

C. Emission Calculations

Attachment 1 of this TSD contains Emissions Summary Form that shows the unlimited and limited PTE for each permitted emissions unit at this facility.

In addition to the permitted units, the facility will have several operations that qualify as Insignificant Activities (IA) under Minn. R. 7007.1300. These IA emissions were included when determining applicability for the facility. Those required to be listed are in Appendix C of the permit.

D. Deviations from Delta Guidance

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. Groups were used for similar emission units to make it easier to specify representative testing of groups of similar units.

3. Public Comment and U.S. EPA Review

The 30-day public comment period ran from October 5 to November 6, 2000, following publication of a public notice in the Duluth News-Tribune on October 5, 2000. No comments were received by the MPCA. Additionally, no comments were received from the U.S. EPA during its 45-day review period following the end of the public comment period.

4. Conclusion

Based on the information provided by LTV Steel Mining Company the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700009-001 and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Stuart Arkley, Bob Beresford, Dennis Becker, Patrick O'Neill (until December 1999), Greg Kvaal (until September 1998)

Peer Review: Trent Wickman

Attachments:

1. Emissions Summary
   - Form GI-07
   - Tables from MPCA report to EPA, 12/30/99

2. Performance test operating conditions proposal