

**AIR EMISSION PERMIT NO. 13700308- 001
IS ISSUED TO**

Hill Wood Products Inc - Mt Iron
County Road 102
Mountain Iron, St. Louis County, MN 55768

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	March 16, 2000

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

Permit Type: Federal ; Part 70
Issue Date: August 17, 2000
Expiration: August 17, 2005
All Title I Conditions do not expire.

Ann Foss
Ann M. Foss
Manager
North/South Major Facilities

For Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

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NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Certain requirements which have been determined not to apply are listed in Table A of this permit.

FACILITY DESCRIPTION:

Hill Wood Products currently operates a wood waste delivery system at the U.S. Steel (Minntac) taconite facility in Mt. Iron, Minnesota. This permit is for construction and operation of a new wood waste delivery system to replace the existing system.

The Hill Wood facility is considered to be part of the Minntac facility, which is a major stationary source under the Prevention of Significant Deterioration (PSD) regulations of 40 CFR 52.21 and a major source under 40 CFR Part 70 and 40 CFR Part 63. A separate Part 70 (Title V) permit will be issued for the Minntac facility.

The proposed Hill Wood facility includes a partially enclosed truck dump and unloading hopper which are controlled by a fabric filter. The wood waste is conveyed in an enclosed system and is stored in a silo. The silo has a one-way valve to allow for pressure equalization but has no exhaust vents.

The maximum capacity of the system is 115,000 tons of wood waste per year, with an estimated actual throughput of 90,000 tons of wood waste per year. To avoid classification as a major modification under the PSD regulations, the permit limits the throughput to 115,000 tons of wood waste per year.

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron

Permit Number: 13700308 - 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
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Monitoring Equipment: Install or make needed repairs to monitoring equipment within 60 days of issuance of the permit if monitoring equipment is not installed and operational on the date the permit is issued.	Minn. R. 7007.0800, subp. 4(D)
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment.	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
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
Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
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
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron

Permit Number: 13700308 - 001

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)
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
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)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
Record keeping: Retain all records at the stationary source for a period of five (5) years or another longer time frame 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)
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)
Emissions Inventory Report: due 91 days after the end of each calendar year following Permit Issuance. To be submitted on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3010
Emission Fees: Due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron

Permit Number: 13700308 - 001

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas or the allowable concentration at the actual exhaust gas flow rate, as described in Minn. R. 7011.0735.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity for emissions vented through SV 001.	Minn. R. 7011.0715, subp. 1(B)
Process Throughput: less than or equal to 115,000 tons/year using 12-month Rolling Sum of wood waste. The amount of wood waste received shall be calculated by the 15th of each month for the previous 12-month period. A record of the amount of wood waste received shall be kept on a daily basis.	Title I Condition: To avoid classification as a major modification under 40 CFR 52.21
The Permittee shall complete the hood evaluation requirements of Minn. R. 7011.0070, subp. 1 for the hood used to capture emissions from EU 001. The hood certification meeting the requirements of Minn. R. 7011.0070, subp. 3 shall be sent to the Agency within 30 days after start-up. A copy of the hood evaluation form containing the elements listed in Minn. R. 7011.0070, subp. 4 shall be kept on site.	Minn. R. 7011.0070, subp. 1

TABLE A: LIMITS AND OTHER REQUIREMENTS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron

Permit Number: 13700308 - 001

What to do	Why to do it
Total Particulate Matter: greater than or equal to 79 percent control efficiency	Minn. R. 7011.0065, subp. 1(A)
Particulate Matter < 10 micron: greater than or equal to 79 percent control efficiency	Minn. R. 7011.0065, subp. 1(A)
Record whether any visible emissions are observed from SV 001 and the time period of observation every 24 hours if in operation. If visible emissions are observed, the Permittee shall follow the Operation and Maintenance Plan for the fabric filter (CE 001) in order to eliminate the visible emissions as soon as possible.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14; Minn. R. 7011.0080
The Permittee shall keep a record of all visible emission checks, whether or not any visible emissions were observed, and of any corrective actions taken.	Minn. R. 7007.0800, subp. 5
<p>A. Maintain an inventory of spare parts that are subject to frequent replacement, as required by the manufacturing specification or documented in records under items H and I;</p> <p>B. Train staff on the operation and monitoring of control equipment and troubleshooting, and train and require staff to respond to indications of malfunctioning equipment, including alarms and other indicators of abnormal operation;</p> <p>C. Thoroughly inspect all control equipment at least annually, or as required by the manufacturing specification (this often requires shutting down temporarily);</p> <p>D. Inspect monthly, or as required by the manufacturing specification, components that are subject to wear or plugging, for example: bearings, belts, hoses, fans, nozzles, orifices, and ducts;</p> <p>E. Inspect quarterly, or as required by the manufacturing specification, components that are not subject to wear including structural components, housings, duct, and hoods;</p>	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14; Minn. R. 7011.0075, subp. 2
<p>F. Check daily, or as required by the manufacturing specification, monitoring equipment, for example: pressure gauges, chart recorders, temperature indicators, and recorders;</p> <p>G. Calibrate annually, or as required by manufacturing specification, all monitoring equipment;</p> <p>H. Maintain a record of activities conducted in items A to G consisting of the activity completed, the date the activity was completed, and any corrective action taken; and</p> <p>I. Maintain a record of parts replaced, repaired, or modified for the previous five years.</p>	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 14; Minn. R. 7011.0075, subp. 2
The Permittee shall operate the control equipment monitoring equipment at all times the control equipment is required to operate in compliance with Minn. R. 7011.0075.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 4; Minn. R. 7011.0075, subp. 3

TABLE B: SUBMITTALS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron
Permit Number: 13700308 - 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

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron
Permit Number: 13700308 - 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

TABLE B: RECURRENT SUBMITTALS

08/17/00

Facility Name: Hill Wood Products Inc - Mt Iron

Permit Number: 13700308 - 001

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 30 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

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13700308-001

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 Phone Number	Facility Address (SIC Code: 5199)
Hill Wood Products, Inc. P.O. Box 398 Cook, MN 55723 Contact: Mr. Steve Hill – President (218) 666-5923	Hill Wood Products, Inc. County Road 102 St. Louis County Mt. Iron, MN

1.2. Description of the facility

Hill Wood Products currently operates a wood waste delivery system at the U.S. Steel (Minntac) taconite facility in Mt. Iron, Minnesota. This permit is for construction and operation of a new wood waste delivery system to replace the existing system.

The Hill Wood facility is considered to be part of the Minntac facility, which is a major stationary source under the Prevention of Significant Deterioration (PSD) regulations and a major source under 40 CFR Part 70 and 40 CFR Part 63. A separate Part 70 (Title V) permit will be issued for the Minntac facility.

The proposed Hill Wood facility includes a partially enclosed truck dump and unloading hopper (EU 001) that are controlled by a fabric filter (CE 001). The wood waste is conveyed in an enclosed system through a hog and up a bucket elevator where it is stored in a wood silo. The silo has a one-way valve to allow for pressure equalization but has no exhaust vents.

The maximum capacity of the system is 115,000 tons of wood waste per year, with an estimated actual throughput of 90,000 tons of wood waste per year. The throughput will be limited to 115,000 tons of wood waste per year to avoid triggering the PSD significant levels of 25 tons per year for particulate matter and 15 tons per year for PM₁₀.

1.5. Facility Emissions:

Permit Action Number:

Date: 1/15/2004

Table 1. Total Facility Potential to Emit Summary

	PM tpy	PM10 tpy	SO2 tpy	NOx Tpy	CO tpy	VOC tpy	Pb tpy	Single HAP tpy	All HAPs tpy
Total Facility Limited Potential Emissions	24.2	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 2. Facility and Permit Classification

Classification	Major/Affected Source	*Synthetic Minor	*Minor
PSD		PM, PM ₁₀	
NAAR Not Applicable			
Part 70 Permit Program	PM, PM ₁₀ **		

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

** As indicated above, the Hill Wood Products facility is considered to be part of the U.S. Steel (Minntac) facility, which requires a Part 70 permit. Since the Hill Wood facility will be issued a permit separately from the Minntac facility, it is necessary to issue a Part 70 permit for Hill Wood even though emissions from the Hill Wood facility alone do not exceed the Part 70 permitting thresholds.

2. Regulatory and/or Statutory Basis

Summary Regulatory and/or Statutory Basis of the Emission or operational Limit

Table 3. Regulatory Overview of Facility

EU, GRP, or SV #	Applicable Regulations	Comments:
001	Title I Condition: To avoid classification as a major modification under 40 CFR 52.21.	The process throughput is limited to 115,000 tons of wood waste per year to limit PM and PM ₁₀ emissions to less than the PSD significant levels.
001	Minn. R. 7011.0715	Standards of Performance for Post-1969 Industrial Process Equipment

3. Technical Information

Permit Action Number:

Date: 1/15/2004

3.1 Compliance with Minn. R. 7011.0715

Minn. R. 7011.0715, Standards of Performance for Post-1969 Industrial Process Equipment, establishes a particulate matter emission limit based on the following equation (for process weight rates up to 30 tons/hour):

$$E = 3.59P^{0.62}$$

P = process weight rate

The unloading hopper has a maximum process weight rate of 13.7 tons per hour. The allowable particulate matter emission limit is calculated as follows:

$$E = 3.59(13.7)^{0.62}$$

$$E = \underline{18.2 \text{ lb/hr}}$$

The expected emission rate is calculated as follows:

$$EE \text{ (PM)} = 13.7 \text{ ton/hour} (2.0 \text{ lb/ton}) * (1-0.79) = \underline{5.8 \text{ lb/hr}}$$

$$EE \text{ (PM}_{10}\text{)} = 13.7 \text{ ton/hour} (1.2 \text{ lb/ton}) * (1-0.79) = 3.5 \text{ lb/hr}$$

* From the EPA Fire database.

As can be seen from the above, the expected emission rate of 5.8 lb/hour is below the allowable emission rate of 18.2 lb/hour.

3.2 PSD Applicability

The Hill Wood facility is considered to be part of the Minntac facility, which is classified as a major stationary source under the PSD regulations. To avoid classification as a major modification under PSD, it is necessary to restrict emissions from the Hill Wood facility to less than the PSD significant levels of 25 tons per year for particulate matter and 15 tons per year for PM₁₀. Hill Wood has requested a process throughput limit of 115,000 tons of wood waste per year. Based upon this limit, maximum potential limited emissions are calculated as follows:

$$\begin{aligned} \text{Annual PM emissions} &= 115,000 \text{ tons/yr wood waste} (2.0 \text{ lb/ton}) (1-0.79) (\text{ton}/2,000 \text{ lb}) \\ &= \underline{24.2 \text{ tons per year}} \end{aligned}$$

$$\begin{aligned} \text{Annual PM}_{10} \text{ emissions} &= 115,000 \text{ tons/yr wood waste} (1.2 \text{ lb/ton}) (1-0.79) (\text{ton}/2,000 \text{ lb}) \\ &= \underline{14.5 \text{ tons per year}} \end{aligned}$$

As can be seen from the above, maximum limited potential emissions of particulate matter and PM₁₀ are below the applicable PSD significant levels of 25 and 15 tons per year, respectively.

4. Conclusion

Permit Action Number:

Date: 1/15/2004

Based on the information provided by Hill Wood Products, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700308-001 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Craig Thorstenson, Bob Beresford
Peer Review: Hongming Jiang

Attachments: None

Permit Action Number:
Date: 1/15/2004