

**AIR EMISSION PERMIT NO. 03500031- 001**

**IS ISSUED TO**

**WEYERHAEUSER COMPANY**

**TRUS JOIST - A WEYERHAEUSER BUSINESS**

19586 County Road 102

Deerwood, Crow Wing County, MN 56444

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

Permit Type  
Total Facility Operating Permit

Application Date  
April 1995  
Updated September 2003

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

**Permit Type:** Federal; Pt 70/Limits to Avoid NSR

**Issue Date:** September 26, 2005

**Expiration:** September 26, 2010  
All Title I Conditions do not expire.

---

Richard J. Sandberg, Manager  
Air Quality Permits Section  
Industrial Division

for Sheryl A. Corrigan  
Commissioner  
Minnesota Pollution Control Agency

## **TABLE OF CONTENTS**

**Notice to the Permittee**

**Permit Shield**

**Facility Description**

**Table A: Limits and Other Requirements**

**Table B: Submittals**

**Table C: Compliance Schedule** (*Not used in this permit*)

**Appendices:**

**Appendix A:** (*Not used in this permit*)

**Appendix B: List of Insignificant Activities**

**NOTICE TO THE PERMITTEE:**

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

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

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

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

**PERMIT SHIELD:**

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

**FACILITY DESCRIPTION:**

Laminated Strand Lumber (LSL) is produced at the Trus Joist Deerwood facility, located in Crow Wing County, Minnesota. The LSL is an Engineered Wood Product (EWP) which is made from strands of wood obtained from aspen and other hardwood species which are then bound together with structural resins.

The facility receives hardwood logs and stores them in a logyard. The logs are conditioned in heated water, debarked, and then proceed to one of two redundant processing lines. The logs are cut into strands which are dried in a rotary drum dryer. The strands are metered and screened on each processing line and conveyed to a fully-enclosed blender where liquid Methylene Diphenyl Diisocyanate (MDI) resin and other material such as wax and zinc borate are added to the strands. The coated strands leave the blender and are distributed to the formers, which lay up a continuous mat of parallel aligned strands. The mat is cut into sections and conveyed to the press. Mats are cured in a hydraulic press which has heated top and bottom. The press compacts the loose mat of strands into a billet. Pressed billets are sawn and sanded to specific lengths and widths by an automated finishing line. Upon finishing, the product is stacked and packaged for shipment.

The major heat source for the processes at the facility is a 225 mmBtu/hr four-cell Wellons furnace. The furnace is fired by bark and wood residuals. One duct from the furnace carries hot gases to a heat exchanger which is used to heat transfer oil; this oil is used for heating the billet press as well as for space heating and for generating steam. Another duct from the furnace carries combustion gases to the two rotary dryers where they are used to dry the wood strands. Additional heat is supplied to the dryers with two 40 mmBtu/hr gas/wood-dust burners. There is also a 40 mmBtu/hr back-up thermal oil heater at the facility.

The facility has emission limits to establish it as a synthetic minor source with regard to federal New Source Review regulations. The facility is a major source of Hazardous Air Pollutant (HAP) emissions.

The pollution control equipment and main pollutants of concern from the emission units at the Facility are as follows: the rotary dryers and Wellons furnace system are sources of Particulate Matter (PM and PM<sub>10</sub>); Volatile Organic Compounds (VOCs); Carbon Monoxide (CO); and Nitrogen Oxides (NO<sub>x</sub>). The particulate emissions in the exhaust stream from the dryers system are controlled by cyclones and Electrified Filter Beds (EFBs). The particulate emissions in the exhaust stream from the Wellons furnace which goes to the thermal oil heater is controlled by multiclones and an ESP. The blending and forming processes are sources of VOCs and HAPs. The billet press is controlled by a superheater, for control of the MDI, and is primarily a source of VOC, but also particulates. The in-plant particulate sources (e.g. the handling, finishing and forming processes) are generally controlled by baghouses. There are also fugitive particulate sources such as bark and fuel piles and paved and unpaved roads.

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 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.**

<b>Subject Item: Total Facility</b>	
<b>What to do</b>	<b>Why to do it</b>
<b>SOURCE-SPECIFIC REQUIREMENTS</b>	hdr
Comply with Plywood and Composite Wood Product (PCWP) MACT, Subpart DDDD, as applicable.	40 CFR Subpart DDDD
Comply with Industrial Boiler MACT, Subpart DDDDD, as applicable.	40 CFR Subpart DDDDD
Fugitive Emissions Control: The Permittee shall follow the actions and record keeping specified below for control of fugitives. 1. All ash haul trucks containing dry, fine ash shall be covered prior to leaving the facility. 2. The Permittee shall institute a 10 miles/hr speed limit on all of the facility's unpaved roads.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150
Fugitive Emissions Control (continued):  3. The Permittee shall control fugitive emissions from the facility's unpaved roads by one of the following methods: (a) The Permittee shall water all of the facility's unpaved roads once every 24 hrs at an application rate of approximately 0.014 gal/ft <sup>2</sup> . If the roads are frozen, if a rainfall or snowfall of 0.25 inch occurs within a 24-hr period, or if the roads are too muddy from ground thawing conditions or extended rainfall to drive on, the Permittee is not required to water for that 24-hr period. (b) The Permittee shall apply a chemical suppressant once every 2 weeks at a volume of 0.06 gal/yd <sup>2</sup> . If the roads are frozen, if a rainfall or snowfall of 0.25 inch occurs within a 24-hr period, or if the roads are too muddy from ground thawing conditions or extended rainfall to drive on, the Permittee is not required to add suppressant.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150
Recordkeeping for Fugitive Emissions Control: The Permittee shall maintain a log of the unpaved road watering or chemical application. The log shall note the date, time and duration of each watering or application. The log shall also include a reason why the roads were not watered for each day that they were not. Daily records shall be kept of the weather conditions; this shall include the date, outside temperature, and rainfall in previous 24-hour period. The logs and weather records do not need to be kept during the winter months when the ground is frozen, i.e. December 1 through April 1.	Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2; Minn. R. 7011.0150
Recordkeeping for Tanks: Maintain records showing the dimensions of the tank and an analysis showing the tank capacity. These records shall be maintained for the life of the source.	40 CFR Section 60.116b(b); Minn. R. 7011.1520(C)
The facility currently uses ozone-depleting substances as defined in 40 CFR pt. 82. Sections 601-618 of the 1990 Clean Air Act Amendments and 40 CFR pt. 82 may apply to your facility. Read Sections 601-618 and 40 CFR pt. 82 to determine all the requirements that apply to your facility.	40 CFR pt. 82
<b>OPERATIONAL REQUIREMENTS</b>	hdr
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
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and shall include a preventative maintenance program for that equipment, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
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**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

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
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
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)
The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.  The VOC testing and calculations for the dryer system (GP 001) and the billet press (EU 005) shall be performed in accordance with the guidance in AP-42 Section 10.6.1.3, dated 3/2002. When a performance test for VOC is conducted, a formaldehyde test shall be conducted simultaneously. The results shall be reported on an "as VOC" basis, summing the Method 25 or 25A data (adjusted to a propane mass basis) and the formaldehyde test result.	Minn. R. ch. 7017
Performance Test Notifications and Submittals:  Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements.  Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test  The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
RECORDKEEPING	hdr
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)
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)
REPORTING/SUBMITTALS	hdr

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

<p>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.</p> <p>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.</p>	Minn. R. 7019.1000, subp. 3
<p>Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2.</p> <p>At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.</p>	Minn. R. 7019.1000, subp. 2
<p>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.</p>	Minn. R. 7019.1000, subp. 1
<p>Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description:</p> <ol style="list-style-type: none"> <li>1. the cause of the deviation;</li> <li>2. the exact dates of the period of the deviation, if the deviation has been corrected;</li> <li>3. whether or not the deviation has been corrected;</li> <li>4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</li> <li>5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</li> </ol>	Minn. R. 7019.1000, subp. 1
<p>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.</p>	Minn. R. 7007.1150 through Minn. R. 7007.1500
<p>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).</p>	Minn. R. 7007.1400, subp. 1(H)
<p>Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.</p>	Minn. R. 7019.3000 through Minn. R. 7019.3100
<p>Emission Fees: due 60 days after receipt of an MPCA bill.</p>	Emission Inventory Report: due 91 days after end of each calendar year following permit issuance (April 1). To be submitted on a form approved by the Commissioner.

# TABLE A: LIMITS AND OTHER REQUIREMENTS

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** GP 001 SV 001, SV 002, SV 004 - Furnace & Dryers

**Associated Items:** EU 001 4 Cell Furnace

EU 002 Strand Dryer 1

EU 003 Strand Dryer 2

EU 030 Dust/Gas Burner on Dryer 1

EU 031 Dust/Gas Burner on Dryer 2

SV 001

SV 002

SV 004

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 23.1 lbs/hour	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Particulate Matter < 10 micron: less than or equal to 23.1 lbs/hour	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
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)
Nitrogen Oxides: less than or equal to 51.3 lbs/hour	Title I Condition: Limit set due to modeling; limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Carbon Monoxide: less than or equal to 53.5 lbs/hour	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Volatile Organic Compounds: less than or equal to 36 lbs/hour	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Acrolein: less than or equal to 0.772 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Temperature: less than or equal to 1007 degrees F using 1-Hour Average (dryer inlet temperature). This limit will be amended as specified in Minn. R. 7017.2025, upon completion of each subsequent performance test.	Title I Condition: Temperature limit taken to limit VOC emissions to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2025, subp. 3
Fuel Usage: less than or equal to 4000 lbs/month using 12-month Rolling Average of on-site generated materials. The on-site generated materials may consist of adsorbent materials saturated with non-hazardous, on- or off-specification oils. The material may also consist of the water/oil/wood waste slurry that is periodically cleaned from the press enclosure and of non-wood residual materials.  This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Fuel Usage: limited to natural gas and hog fuel (bark, wood, trims and dust collected from baghouses), and on-site generated adsorbent materials as defined and limited above.	Minn. R. 7007.0800, subp. 2
Fuel Usage: less than or equal to 23506 lbs/hour using 12-hour Average (this fuel usage limit applies to solid fuel); divide total weight of fuel by total operating time in each 12-hour block. Down time of 15 or more minutes is not to be included as operating time. This limit will be amended as specified in Minn. R. 7017.2025, upon completion of each subsequent performance test.	Minn. R. 7017.2025, subp. 3a
Process Throughput: less than or equal to 47305 lbs/hour using 12-hour Average (47,305 lbs of oven-dried strands/hour); divide total weight of oven-dried strands by total operating time in each 12-hour block. Down time of 15 or more minutes is not to be included as operating time. This limit will be amended as specified in Minn. R. 7017.2025, upon completion of each subsequent performance test. This is oven-dried strands process throughput for dryers.	Minn. R. 7017.2025, subp. 3a
RECORDKEEPING	hdr



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

<p>Daily Recordkeeping: At least once each 12-hour discrete block of each day of operation, the Permittee shall record the total quantity of oven-dried strands produced in the dryer system and the total quantity of fuel (bark and sawdust) used in the furnace. This shall be based on production records and fuel usage records. The Permittee, on each day of operation, shall then calculate and record the 12-hour block average for each of the 12-hour blocks of the previous day, for fuel usage and for strand production.</p> <p>At least once each day of each day of operation, the Permittee shall calculate, record, and maintain records of, the total weight of the on-site generated materials added to the furnace fuel stream.</p>	Minn. R. 7007.0800, subp. 4 and 5
<p>Monthly Recordkeeping: By the 15th day of each month, the Permittee shall calculate and record the monthly total and 12-month rolling average of on-site generated material burned in the furnace for the previous month.</p>	Minn. R. 7007.0800, subp. 4 and 5
PERFORMANCE TESTING	hdr
Initial Performance Test: due 180 days after Permit Issuance to measure emissions of Total Particulate Matter, Particulate Matter less than 10 microns, Nitrogen Oxides, Volatile Organic Compounds, and Carbon Monoxide.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Permit Issuance to measure Opacity and emissions of Acrolein. Testing for Acrolein is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each year following Initial Performance Test to measure emissions of Particulate Matter less than 10 microns and Carbon Monoxide.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test to measure emissions of Total Particulate Matter, Nitrogen Oxides, and Volatile Organic Compounds.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test to measure Opacity and emissions of Acrolein. Testing for Acrolein is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2; Minn. R. 7017.2020, subp. 1

# TABLE A: LIMITS AND OTHER REQUIREMENTS

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** GP 002 Systems controlled by baghouses

**Associated Items:** CE 008 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 009 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 010 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 012 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
CE 013 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
SV 006  
SV 007  
SV 010  
SV 011  
SV 012

What to do	Why to do it
<b>LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.007 grains/dry standard cubic foot . This limit applies separately to each stack. This is more stringent than limit in Minn. R. 7011.0715, subp. 1(A), which also applies to each individual emission unit.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Particulate Matter < 10 micron: less than or equal to 0.007 grains/dry standard cubic foot . This limit applies separately to each baghouse/stack.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
<b>MONITORING</b>	hdr
Visible Emissions: The Permittee shall check the fabric filter stacks (SV 006, 007, 010, 011, and 012) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in the O&M Plan.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
<b>CONTROL EQUIPMENT</b>	hdr
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the fabric filter at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; <Minn. R. 7007.0800, subp. 2 and 14>
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the normal operating range specified in the O&M Plan; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the normal operating range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
PERFORMANCE TESTING	hdr
Initial Performance Test: due 180 days after Permit Issuance to measure Total Particulate Matter, Particulate Matter less than 10 microns, and Opacity. The Permittee shall select two representative stacks for testing.	Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test to measure Total Particulate Matter, Particulate Matter less than 10 microns, and Opacity. The Permittee shall select two representative stacks for testing which shall be different than the two selected for the most recent performance test.	Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** GP 003 EFB Requirements**Associated Items:** CE 002 Electrified Filter Bed

CE 005 Electrified Filter Bed

CE 006 Electrified Filter Bed

What to do	Why to do it
The Permittee shall operate and maintain the electrified filter beds any time that any process equipment controlled by the electrified filter bed is in operation.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter and Particulate Matter < 10 micron: greater than or equal to 80 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
EFB Bed Voltage: greater than or equal to 10 kV, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the bed voltage recorded during the most recent MPCA-approved performance test where compliance for PM and/or PM10 was demonstrated. If the EFB bed voltage falls below the minimum, this shall be reported as a deviation.	Title I Condition: Monitoring for limits set to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
EFB Ionizer Voltage: greater than or equal to 20 kV, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the ionizer voltage recorded during the most recent MPCA-approved performance test where compliance for PM and/or PM10 was demonstrated. If the EFB ionizer voltage falls below the minimum, this shall be reported as a deviation.	Title I Condition: Monitoring for limits set to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
EFB Pressure Drop: greater than or equal to 1.0 inches water column, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the pressure drop recorded during the most recent MPCA-approved performance test where compliance for PM and/or PM10 was demonstrated. If the EFB pressure drop falls below the minimum, this shall be reported as a deviation.	Title I Condition: Monitoring for limits set to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Recordkeeping of EFB Bed Voltage, Ionizer Voltage and Pressure Drop. Once each day while in operation, the Permittee shall monitor and record the EFB bed voltage, ionizer voltage, and pressure drop. The Permittee shall record the time and date of each reading and whether or not the recorded measurement was within the range specified in this permit.	Title I Condition: Monitoring for limits set to avoid classification as a major source under 40 CFR 52.21; Minn. R. 7007.0800, subp. 4 and 5
Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer specifications, the Permittee shall inspect the control equipment internal and external system components. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: If the monitored parameters are outside the ranges specified by this permit or if the EFB or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the monitored parameters to within the permitted range and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the EFB. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the EFB in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** SV 009**Associated Items:** EU 024 Pre-Trim

EU 025 Billet Cooler

What to do	Why to do it
<b>LIMITS</b>	hdr
Total Particulate Matter: less than or equal to 0.005 grains/dry standard cubic foot This is more stringent than limit in Minn. R. 7011.0715, subp. 1(A), which also applies.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Particulate Matter < 10 micron: less than or equal to 0.005 grains/dry standard cubic foot	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Acrolein: less than or equal to 0.013 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
<b>MONITORING</b>	hdr
Visible Emissions: The Permittee shall check the fabric filter stack (SV 009) for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across the fabric filter, once each day of operation.	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
Recordkeeping of Visible Emissions and Pressure Drop. The Permittee shall record the time and date of each visible emission inspection and pressure drop reading, and whether or not any visible emissions were observed, and whether or not the observed pressure drop was within the range specified in this permit	Title I Condition: Monitoring for Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 4 and 5
<b>CONTROL EQUIPMENT - CE 025</b>	hdr
The Permittee shall operate and maintain the fabric filter (CE 025) at all times that any emission unit controlled by the fabric filter is in operation.	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; to avoid classification as a major source under 40 CFR Section 70.2; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter. The Permittee shall keep a record of the type and date of any corrective action taken for each filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the monitored fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the control equipment components. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
The Permittee shall operate and maintain the fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
<b>PERFORMANCE TESTING</b>	hdr
Initial Performance Test: due 180 days after Permit Issuance to measure emissions of Total Particulate Matter and Particulate Matter less than 10 microns.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

Initial Performance Test: due 180 days after Permit Issuance to measure Opacity and emissions of Acrolein.  Testing for Acrolein is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7011.0715, subp 1(B); Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test to measure Total Particulate Matter, Particulate Matter less than 10 microns.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 60 months following Initial Performance Test to measure Opacity.	Minn. R. 7011.0715, subp 1(B); Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** EU 001 4 Cell Furnace

**Associated Items:** CE 002 Electrified Filter Bed  
 CE 005 Electrified Filter Bed  
 CE 006 Electrified Filter Bed  
 CE 016 Fabric Filter - Low Temperature, i.e., T<180 Degrees F  
 CE 018 Electrostatic Precipitator - Medium Efficiency  
 CE 019 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones  
 CE 020 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones  
 CE 021 Centrifugal Collector - High Efficiency  
 CE 022 Centrifugal Collector - High Efficiency  
 CE 023 Centrifugal Collector - High Efficiency  
 CE 024 Centrifugal Collector - High Efficiency  
 GP 001 SV 001, SV 002, SV 004 - Furnace & Dryers  
 SV 001  
 SV 002  
 SV 003  
 SV 004  
 SV 005

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.10 lbs/million Btu heat input . This emission limit does not apply during periods of startup, shutdown, or malfunction.	40 CFR Section 60.43b(c)(1); Minn. R. 7011.0565
Opacity: less than or equal to 20 percent opacity , except for one 6-minute period per hour of not more than 27 percent opacity. This limit does not apply during periods of startup, shutdown, or malfunction.	40 CFR Section 60.43b(f); Minn. R. 7011.0565
The owner or operator shall install, calibrate, maintain, and operate a COMS for measuring the opacity of emissions discharged to the atmosphere, and record the output of the system.	40 CFR Section 60.48b(a); Minn. R. 7011.0565
See requirements for opacity monitor under Subject Item CM 001. See requirements for EFBs under Subject Item GP 003 and requirements for the ESP under CE 018.	hdr
Initial Performance Test: due 180 days after Permit Issuance to measure emissions of Total Particulate Matter. Testing is to be performed in SV 001.	Monitoring for NSPS limit (40 CFR Section 60.43b); Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test to measure emissions of Total Particulate Matter.	Monitoring for NSPS limit (40 CFR Section 60.43b); Minn. R. 7017.2020, subp. 1

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** EU 005 Billet Press**Associated Items:** CE 007 Other

SV 008

What to do	Why to do it
Total Particulate Matter: less than or equal to 8.32 lbs/hour . This limit is more stringent than limit in Minn. R. 7011.0715, subp. 1(A) which also applies.	Title I Condition: Limit to avoid classification as major source under 40 CFR Section 52.21; Minn. R. 7007.0800
Particulate Matter < 10 micron: less than or equal to 8.32 lbs/hour	Title I Condition: Limit to avoid classification as major source under 40 CFR Section 52.21; Minn. R. 7007.0800
Opacity: less than or equal to 20 percent opacity	Minn. R. 7011.0715, subp. 1(B)
Volatile Organic Compounds: less than or equal to 14.6 lbs/hour	Title I Condition: Limit to avoid classification as major source under 40 CFR Section 52.21; Minn. R. 7007.0800
Methylene diphenyl diisocyanate: less than or equal to 0.27 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Acrolein: less than or equal to 0.013 lbs/hour . This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Temperature: greater than or equal to 200 degrees F (Superheater Outlet Temperature). This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2
Initial Performance Test: due 180 days after Permit Issuance to measure Particulate Matter, Particulate Matter less than 10 microns, and Volatile Organic Compounds emissions.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Permit Issuance to measure MDI and Acrolein emissions.  This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. R. 7007.0800, subp. 2; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test to measure Particulate Matter, Particulate Matter less than 10 microns, and Volatile Organic Compounds emissions.	Title I Condition: Monitoring for limits taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7017.2020, subp. 1
Performance Test: due before end of each 36 months following Initial Performance Test to measure MDI emissions.	Minn. R. 7007.0800, subp. 2; Minn. R. 7017.2020, subp. 1
The Permittee shall maintain and operate a thermocouple monitoring device that continuously indicates and records the superheater outlet gas temperature. The monitoring device shall be located immediately downstream of the superheater. The monitoring device shall have a margin of error less than the greater of +/- 0.75 percent of the temperature being measured or +/- 2.5 degrees Celsius.	Minn. R. 7007.0800, subp. 4 & 5
The Permittee shall maintain either a continuous hard copy readout of the superheater outlet temperature, or maintain a hard copy of manual readings taken at least once every hour.	Minn. R. 7007.0800, subp. 4 & 5



**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** EU 032 Back-up Thermal Oil Heater**Associated Items:** SV 015

What to do	Why to do it
Fuel Usage: limited to natural gas.	Title I Condition: fuel type relied on to avoid classification as a major source under 40 CFR Section 52.21
Recordkeeping: Record and maintain records of the amounts of each fuel combusted on a monthly basis. These records may consist of purchase records or receipts.	40 CFR Section 60.13(i) and February 20, 1992, EPA memorandum to meet the requirements of 40 CFR Section 60.48c(g) and (i)
Natural Gas Fuel Usage: less than or equal to 210 million cubic feet/year using 12-month Rolling Sum	Title I Condition: Limit to avoid classification as major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Daily Recordkeeping. On each day of operation, the Permittee shall calculate, record, and maintain the total quantity of the natural gas usage in EU 032. This shall be based on flowmeters or delivery records.	Title I Condition: Monitoring for Limit to avoid classification as major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Monthly Recordkeeping -- Natural Gas Fuel Usage. By the 15th of the month, the Permittee shall calculate and record the following: 1) The total usage of natural gas for the previous calendar month using the daily usage records. 2) The 12-month rolling sum natural gas fuel usage for the previous 12 month period by summing the monthly natural gas fuel usage data for the previous 12 months.	Minn. R. 7007.0800, subp. 4 and 5

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** CE 018 Electrostatic Precipitator - Medium Efficiency**Associated Items:** EU 001 4 Cell Furnace

EU 004 Thermal Oil Heater

What to do	Why to do it
The Permittee shall operate and maintain the control equipment such that it achieves an overall control efficiency for Total Particulate Matter and Particulate Matter < 10 micron: greater than or equal to 80 percent control efficiency	Title I Condition: Limit taken to avoid classification as a major source and modification under 40 CFR Section 52.21; Minn. R. 7007.3000
Number of Fields On-line: greater than or equal to 1, unless a new minimum is set pursuant to Minn. R. 7017.2025, subp. 3, based on the number of fields on-line recorded during the most recent MPCA approved performance test where compliance for PM and/or PM10 emissions was demonstrated. If the number of fields drops below the minimum required anytime that process gases are going through the control equipment, this shall be reported as a deviation.	Title I Condition: Monitoring for limits set to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.0800, subp. 2 and 14
The Permittee shall operate and maintain the electrostatic precipitator any time that any process equipment controlled by the electrostatic precipitator is in operation.	Title I Condition: Limit taken to avoid classification as a major source under 40 CFR Section 52.21; Minn. R. 7007.3000
Daily Monitoring: The Permittee shall physically verify and record the number of fields on-line at least once during each operating day of operation. The Permittee shall maintain a written record of the daily verifications.	Minn. R. 7007.0800, subp. 4 and 5
Quarterly Inspections: At least once per calendar quarter, or more frequently if required by the manufacturer specifications, the Permittee shall inspect the control equipment internal and external system components. The Permittee shall maintain a written record of the inspection and any corrective actions taken resulting from the inspection.	Minn. R. 7007.0800, subp. 4, 5, and 14
Corrective Actions: If the number of fields on-line is below the minimum specified by this permit or if the electrostatic precipitator or any of its components are found during the inspections to need repair, the Permittee shall take corrective action as soon as possible. Corrective actions shall return the number of fields on-line to at least the permitted minimum and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the electrostatic precipitator. The Permittee shall keep a record of the type and date of any corrective action taken.	Minn. R. 7007.0800, subp. 4, 5, and 14
The Permittee shall operate and maintain the electrostatic precipitator in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14

**TABLE A: LIMITS AND OTHER REQUIREMENTS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

**Subject Item:** CM 001 Thermal Oil Heater: 20% Opacity, SV001, 6-min ave.**Associated Items:** DA 001

MR 001 Thermal Oil Heater

What to do	Why to do it
Emissions Monitoring: The owner or operator shall use a COMS to measure opacity emissions from EU 001.	40 CFR Section 60.48b(a); Minn. R. 7017.1006
Continuous Operation: COMS must be operated and data recorded during all periods of emission unit operation including periods of emission unit start-up, shutdown, or malfunction except for periods of acceptable monitor downtime. This requirement applies whether or not a numerical emission limit applies during these periods. A COMS must not be bypassed except in emergencies where failure to bypass would endanger human health, safety, or plant equipment.  Acceptable monitor downtime includes reasonable periods as listed in Items A, B, C and D of Minn. R. 7017.1090, subp. 2.	Minn. R. 7017.1090, subp. 1; 40 CFR Section 60.13(e)
COMS Daily Calibration Drift (CD) Check: The CD shall be quantified and recorded at zero (low-level) and upscale (high-level) opacity at least once daily according to the requirements of 40 CFR Section 60.13(d)(2). The span value shall be between 60 and 80 percent.	Minn. R. 7017.1210, subp. 2; 40 CFR Section 60.13(d); 40 CFR Section 60.48b(e)(1)
COMS Calibration Error Audit: due before end of each calendar half-year following Permit Issuance. Conduct three point calibration error audits at least 3 months apart but no greater than 8 months apart. Conduct audits in accordance with Minn. R. 7017.1210, subp. 3.	Minn. R. 7017.1210, subp. 3
COMS Calibration Error Audit Results Summary: due 30 days after end of the calendar quarter in which the COMS Calibration Error Audit was completed.	Minn. R. 7017.1220
Attenuator Calibration: The Permittee shall perform an attenuator calibration in accordance with Minn. R. 7017.1210, subp. 4.	Minn. R. 7017.1210, subp. 4
All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data for each successive 6-minute period.	Minn. R. 7017.1200, subp. 1, 2 & 3; 40 CFR Section 60.13(e)(1); 40 CFR Section 60.13(h)
Recordkeeping: The owner or operator must retain records of all COMS monitoring data and support information for a period of five years from the date of the monitoring sample, measurement or report. Records shall be kept at the source.	Minn. R. 7017.1130
QA Plan Required: Develop and implement a written quality assurance plan which covers each COMS. The plan shall be on site and available for inspection within 30 days after monitor certification. The plan shall contain the written procedures listed in Minn. R. 7017.1210, subp. 1.	Minn. R. 7017.1210

## TABLE B: SUBMITTALS

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business  
Permit Number: 03500031 - 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:

AQ Permit Technical Advisor  
Industrial 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:

AQ Compliance Tracking Coordinator  
Industrial 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**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 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
Computer Dispersion Modeling Information	due 1,096 days after Permit Issuance. Submit modeling data as specified in MPCA guidance for Modeling Information Requests for PM10 and NOx. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Notification	due 120 days after 09/28/2004, effective date of PCWP MACT, subp. DDDD (due 1/26/05).	Total Facility
Notification	due 120 days after 11/12/2004, effective date of Industrial, Commerical, and Institutional Boilers and Process Heaters, MACT, subp. DDDDD (due 3/12/05).	Total Facility

**TABLE B: RECURRENT SUBMITTALS**

09/26/05

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031 - 001

What to send	When to send	Portion of Facility Affected
Excess Emissions/Downtime Reports (EER's)	due 30 days after end of each calendar quarter following Permit Issuance (Submit Deviations Reporting Form DRF-1 as amended). The EER shall indicate all periods of monitor bypass and all periods of exceedances of the limit including exceedances allowed by an applicable standard, i.e. during startup, shutdown, and malfunctions.	CM001
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance. The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following Permit Issuance (for the previous calendar year). To be submitted on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility

## APPENDIX B

### Insignificant Activities and Applicable Requirements

Facility Name: Trus Joist - A Weyerhaeuser Business

Permit Number: 03500031-001

Under Minn. R. 7007.1250, subp. 1(A), the Permittee may add insignificant activities to the stationary source throughout the term of the permit without getting permit amendments. Certain exclusions apply and are listed in Minn. R. 7007.1250, subp. 2.

The following sources at the Permittee's facility qualify as insignificant activities under Minn. R. 7007.1300, subs. 3 and 4 and are not required to be listed in the permit.

<b>Minn. R. 7007.1300, subp.</b>	<b>Rule Description of the Activity</b>	<b>General Applicable Requirement</b>
3(J)	Fugitive emissions from roads and parking lots.	Minn. R. 7011.0105 (opacity)
4(B)	Emission units with potential emissions of less than 2.28 lb/hr or actual emissions of less than 1.0 lb/hr of PM, PM <sub>10</sub> , NO <sub>x</sub> , SO <sub>2</sub> , and VOCs. <i>Emission units that Trus Joist has that qualify under this subpart include:</i> <ul style="list-style-type: none"><li>• <i>Emergency generator</i></li><li>• <i>Emergency fire pump</i></li><li>• <i>Resin tanks 1-4</i></li><li>• <i>Resin tank loading and storage system</i></li><li>• <i>Roll coating ink</i></li><li>• <i>Release agent</i></li><li>• <i>Short strand bin vent</i></li><li>• <i>Short strand stockpile (unloading to pile)</i></li><li>• <i>Short strand stockpile (wind erosion)</i></li><li>• <i>Short strand recovery feeder</i></li></ul>	Minn. R. 7011.0715 (PM and opacity)
Minn. R. 7008.4110 (formerly Minn. R. 7007.1300, subp. 3(D)(2))	Equipment venting PM/PM <sub>10</sub> inside a building, provided that emissions from the equipment are filtered through an air cleaning system and vented inside of the building 100% of the time. <i>Trus Joist has a dust filter in the specialty finishing area</i>	Minn. R. 7011.0715 (PM and opacity)

**TECHNICAL SUPPORT DOCUMENT**  
**For**  
**AIR EMISSION PERMIT NO. 03500031-001**

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

**1. General Information**

**1.1. Applicant and Stationary Source Location:**

Stationary Source/Address (SIC Code: 2493)	Mailing Address
19586 County Road 102 Deerwood, MN 56444 Crow Wing County	P. O. Box 460 Deerwood, MN 56444
Contact: Wendy Berndt Phone: (218) 546-2002	Corporate/Company Owner: Weyerhaeuser Company P.O. Box 9777 Federal Way, WA 98063-9777

**1.2. Description of the Permit Action**

Laminated strand lumber (LSL) is produced at the Trus Joist Deerwood facility, located in Crow Wing County, Minnesota. The LSL is an Engineered Wood Product (EWP) which is made from strands of wood obtained from aspen and other hardwood species which are then bound together with structural resins.

The facility receives hardwood logs and stores them in a logyard. The logs are conditioned in heated water, debarked, and then proceed to one of two redundant processing lines. The logs are cut into strands by rotating knives. The strands are then stored in green bins and screened to remove fine material, and then dried in a rotary drum dryer. After drying the strands are stored in dry storage bins.

Strands from the dry bins are metered and screened on each processing line and conveyed to a fully-enclosed blender where liquid Methylene Diphenyl Diisocyanate (MDI) resin and other material such as wax and zinc borate are added to the strands. The coated strands leave the blender and are distributed to the formers, which lay up a continuous mat of parallel aligned strands. The mat is cut into sections and conveyed to the press.



Mats are cured in a single-opening, hydraulic press which has heated top and bottom platens that are fitted with steam-injection ports. The press compacts the loose mat of strands into a billet. Pressed billets are sawn and sanded to specific lengths and widths by an automated finishing line. Upon finishing, the product is stacked and packaged for shipment.

The major heat source for the processes at the facility is a 225 mmBtu/hr four-cell Wellons furnace. The furnace is fired by bark and wood residuals. One duct from the furnace carries hot gases to a heat exchanger which is used to heat transfer oil; this oil is used for heating the billet press as well as for space heating. Another duct from the furnace carries combustion gases to the two rotary dryers where they are used to dry the wood strands. Additional heat is supplied to the dryers with two 40 mmBtu/hr gas/wood-dust burners.

The facility has emission limits to establish it as a synthetic minor source with regard to federal New Source Review regulations. The facility is a major source of Hazardous Air Pollutant (HAP) emissions.

The pollution control equipment and main pollutants of concern from the emission units at the Facility are as follows: the rotary dryers and Wellons furnace system are sources of Particulate Matter (PM and PM<sub>10</sub>); Volatile Organic Compounds (VOCs); Carbon Monoxide (CO); and Nitrogen Oxides (NO<sub>x</sub>). The particulate emissions in the exhaust stream from the dryers system are controlled by cyclones and Electrified Filter Beds (EFBs). The particulate emissions in the exhaust stream from the Wellons furnace which goes to the thermal oil heater is controlled by multiclones and an ESP. The blending and forming processes are sources of VOCs and HAPs. The billet press is controlled by a superheater, for control of the MDI, and is primarily a source of VOC, but also particulates. The in-plant particulate sources (e.g. the handling, finishing and forming processes) are generally controlled by baghouses. There are also fugitive particulate sources such as bark and fuel piles and paved and unpaved roads.

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

Emission limit for CO has been decreased from 56.0 lb/hr to 53.5 lb/hr on GP 001. Emission limit for VOC has been decreased from 40.9 lb/hr to 36lb/hr on GP 001. These emission limits were decreased to keep the facility a synthetic minor source for New Source Review. The facility-wide acrolein limit has also been increased from 0.2 lb/hr to 0.798 lb/hr in accordance with the modified Air Emissions Risk Analysis (AERA); however, the acrolein limit is no longer a facility-wide limit but has been split up to GP 001 (the dryer system), EU 005 (billet press) and SV 009 (pre-trim and billet cooler).

## 1.4 Permit History

Permit Number and Issuance Date	Action Authorized
Stipulation Agreement (6/9/03)	The stipulation agreement addressed Notice of Noncompliance (NON) issued for failed performance testing for (addresses NOVs – 10/18/04, ??)
Letter (5/8/02)	Notice of Compliance for performance test; established operational limits
Air Emission Permit No. 03500031-010 (Amendment No. 8 to 2309-90-OT-1) (1/27/2000)	Allows dryer to be operated at higher temperature. Temperature was increased from 900 °F to 1050 °F; testing required after permit issuance for PM, PM <sub>10</sub> , NO <sub>x</sub> , CO, VOCs, Formaldehyde, Acrolein.
03500031-009 (Amendment No. 7 to 2309-90-OT-1) (11/3/97)	Allows portion of the dryer exhaust gas to be routed to the thermal oil heater, combines emission limits on the dryer and thermal oil heater stacks into a set of single limits, increased CO emission limit for combined dryer and thermal oil heater, makes changes related to testing, monitoring and reporting requirements, corrects an applicability error associated with burning oil-soaked sorbents made in Amendment No. 6.
NON (Notice of Noncompliance) (7/22/97)	Notice of Noncompliance for performance test; test results for CO for thermal oil heater were higher than limit.
03500031-008 (Amendment No. 6 to 2309-90-OT-1) (12/23/95)	Installation and operation of natural gas burner for auxiliary plant heat, changes emission limits of several emission points, allows for operational flexibility of which baghouses serve which pieces of equipment, allows on-site generated waste oil and rags to be burned in the thermal oil heater, specifies NSPS requirements for the thermal oil heater and the MDI storage tanks, allows alternative wood species to be burned, establishes new emission testing deadlines, changes acrolein emission limit.
1995	Air Toxics Review update
Amendment No. 5 to 2309-90-OT-1 (7/20/95)	Corrected typographical error of the MDI emission limit.
Amendment No. 4 to 2309-90-OT-1 (9/23/93)	Allowed installation and operation of a pneumatic transfer system, installation and operation of the dryer EFB baghouse in a new location, changed particulate emission limits of several emission points.
Amendment No. 3 to 2309-90-OT-1 (6/7/93)	Allowed use of zinc borate hydrate.
Report (3/23/93)	Evaluation of Airborne MDA and MDI at Trus Joist MacMillan
Amendment No. 2 to 2309-90-OT-1 (8/14/92)	Change in ownership. Allowed Permittee to add use of borax powder in the process.
Amendment No. 1 to 2309-90-OT-1 (7/23/91)	Minor changes in design specifications.
2309-90-OT-1 (1/23/90)	Permit for construction and operation of Aligned Fiberboard Plant
Board Meeting (1/23/90)	Request for issuance of permit for facility. Public meeting held on 11/1/89. Comments were received during comment period.

### **1.5. Facility Emissions:**

**Table 1. Total Facility Potential to Emit Summary**

<b>GP/ EU/ SV No.</b>	<b>Emission Unit Description</b>	<b>PM tpy</b>	<b>PM<sub>10</sub> tpy</b>	<b>SO<sub>2</sub> tpy</b>	<b>NO<sub>x</sub> tpy</b>	<b>CO tpy</b>	<b>VOC tpy</b>	<b>Total HAPs tpy</b>
GP 001	Dryers/Wellons Furnace/Thermal Oil Heater	101	101	25	225	234	158	99
GP 002	Systems Controlled by Baghouses	80	80	---	---	---	---	---
SV 009	Billet Cooler	---	---	---	---	---	5.7	0.21
EU 005	Billet Press	36	36				64	0.67
EU 032	Back-Up Thermal Oil Heater	0.80	0.80	0.06	11	8.8	0.58	0.31

	<b>PM tpy</b>	<b>PM<sub>10</sub> tpy</b>	<b>SO<sub>2</sub> tpy</b>	<b>NO<sub>x</sub> tpy</b>	<b>CO tpy</b>	<b>VOC tpy</b>	<b>All HAPs tpy</b>
Total Facility Limited Potential Emissions	218	218	25	236	243	228	100
Total Facility Actual Emissions (2002)	131	60	14	117	165	3.8	HAPs not reported in emission inventory

**Table 2. Facility Classification**

<b>Classification</b>	<b>Major/Affected Source</b>	<b>Synthetic Minor</b>	<b>Minor</b>
PSD		PM, PM <sub>10</sub> , NO <sub>x</sub> , CO, VOC	SO <sub>2</sub>
Part 70 Permit Program	PM <sub>10</sub> , NO <sub>x</sub> , CO, VOC		SO <sub>2</sub>
Part 63 NESHAP	X		

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

### New Source Review

The facility has limits to keep it a synthetic minor source under New Source Review (NSR) regulations. No changes are authorized by this permit that would affect this status. Emission limits of VOC and CO have been reduced in this permit so that the facility remains non-major for NSR.

### Part 70 Permit Program

The facility is a major source under the Part 70 permit program.

### New Source Performance Standards (NSPS)

There are two New Source Performance Standards applicable to the operations at this facility.

Subpart Dc – Furnace (EU 001) installed 1990, Back-up Thermal Oil Heater (EU 032) – installed 1996.

Subpart Kb – Tanks TK 001 through TK 004

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

The facility is likely subject to two NESHAPs. The two standards which apply to the facility are:

- 40 CFR pt. 63, Subp. DDDDD Industrial/Commercial/Institutional Boilers and Process Heaters National Emission Standards for Hazardous Air Pollutants
- 40 CFR pt. 63, Subp. DDDD Plywood and Composite Wood Products (PCWP) Manufacture National Emission Standards for Hazardous Air Pollutants

The Industrial Boiler NESHAP was published in the federal register on September 14, 2004. The compliance date for this standard is September 14, 2007. The PCWP NESHAP was published on July 30, 2004; the compliance date for this standard is October 1, 2007. The initial notification for both of these standards has been submitted.

### Minnesota State Rules

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

- Minn. R. 7011.0610 Standards of Performance for Fossil-Fuel-Burning Direct Heating Equipment
- Minn. R. 7011.0715 Standards of Performance for Post-1969 Industrial Process Equipment
- Minn. R. 7011.2300 Standards of Performance for Stationary Internal Combustion Engines

**Table 3. Regulatory Overview of Facility**

EU, GP, or SV	Applicable Regulations	Comments:
GP 001 Dryer system + Wellons furnace	40 CFR § 52.21	Limits set on PM, PM <sub>10</sub> , NO <sub>x</sub> , CO and VOC emissions from combined Wellons furnace and drying system to keep the facility from being a major source as defined by 40 CFR § 52.21 (synthetic minor for PSD).
GP 002, SV 009 Emission units controlled by baghouses	40 CFR § 52.21	Limits set on PM, PM <sub>10</sub> emissions to keep the facility from being a major source as defined by 40 CFR § 52.21 (synthetic minor for PSD).
EU 001 Wellons Furnace	40 CFR pt. 60, Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units. Determination of applicability: <ul style="list-style-type: none"> <li>the unit was constructed in 1991;</li> <li>the heat input capacity is 225 mmBtu/hr (100 mmBtu/hr goes to thermal oil heater, rest goes to dryers);</li> <li>the unit combusts only wood.</li> </ul> Note: previous permits identified the Thermal Oil Heater as the emission unit subject to NSPS subp. Dc; however, the Wellons furnace is the source of heat to the thermal oil heater; the size of the emission unit dictates that Db, rather than Dc, is the appropriate standard. The emission limits and requirements are the same, so the only difference is the rule citation.
EU 005 Billet Press	40 CFR § 52.21	Limits set on PM, PM <sub>10</sub> , and VOC emissions to keep the facility from being a major source as defined by 40 CFR § 52.21 (synthetic minor for PSD).
	Minn. R. 7007.0800, subp. 2	Limit set on MDI
EU 032	40 CFR pt. 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Determination of applicability: <ul style="list-style-type: none"> <li>the unit was constructed in 1995;</li> <li>the heat input capacity is 38 mmBtu/hr;</li> <li>the unit combusts only natural gas.</li> </ul>
? tanks	40 CFR pt. 60, subp. Kb	

Total facility	40 CFR pt. 63, subp. DDDD	National Emission Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products. The facility is an existing source under this rule. The likely affected emission units are the dryers and billet press.
EU 001 EU 032	40 CFR pt. 63, subp. DDDDD	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters. These are existing sources under this rule.

The language 'This is a state-only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act' refers to permit requirements that are mandated by state law rather than by the federal Clean Air Act. The language is to clarify the distinction between permit conditions that are required by federal law and those that are required by state law. State law requirements are not enforceable by EPA or by citizens under the federal Clean Air Act, but are fully enforceable by the MPCA and citizens under provisions of state law.

### **3. Technical Information**

#### **3.1 Calculations of Potential to Emit**

Attachment 1 contains detailed spreadsheets and supporting information prepared by the MPCA and the Permittee.

#### **3.2 Air Toxics**

The Permittee was required to conduct performance testing following the issuance of permit amendment no. 8. The testing included VOC testing, as well as testing for acrolein. The testing was required to verify compliance with the permit limits following the increase in dryer temperature as allowed by the permit amendment. Testing conducted in 2000 and 2001 showed acrolein emissions higher than the permitted facility-wide limit of 0.2 lb/hr.

A Stipulation Agreement issued on 6/9/2003 addressed the acrolein noncompliance issue as well as other issues such as particulate matter test failures. Since Trus Joist felt that the existing acrolein permit limit was not achievable on a regular basis, the Stipulation Agreement required that Trus Joist submit a permit amendment application with a proposed new acrolein limit and a supporting air toxics review to justify such a limit. The air toxics review required by Trus Joist was an update to the air risk analysis performed in 1996. The update, as the analysis performed in 1996, considered the emissions and inhalation health risks from acrolein, formaldehyde, NO<sub>x</sub>, and MDI. These pollutants were determined to be the main pollutants of concern in the first air toxics risk analysis conducted in 1989.

Trus Joist submitted the Air Toxics Review Update in September 2003. Since that time, the MPCA has implemented a new process for evaluating risks from air toxics. The MPCA now has a process for conducting a screening-level Air Emissions Risk Analysis (AERA). Therefore, the MPCA has not reviewed and approved the Trus Joist submittal. The emissions data and dispersion modeling results, with some adjustments, from the updated air toxics review were used to complete portions of the AERA forms. The MPCA used up-to-date health benchmarks and qualitative information which had not been requested within the Trus Joist submittal, and added 3 month average (subchronic) concentrations to evaluate the facility using a modified AERA process.

After consideration of all of the information provided in the focused AERA the Risk Managers concluded that the facility air risk analysis is complete. Thresholds for inhalation and cancer risk, with the exception of the residential cancer risk, are exceeded in all situations but several factors, including the following, mitigate the impacts:

1. At the present time no residences are located close to the facility in areas of the highest pollutant concentrations;
2. New MACT standards, which are technology based standards, will be required at this facility in October of 2007. Compliance with these standards will reduce emissions from the dryer system by a minimum of 40 percent;
3. The modeled predictions of impacts from the facility are 1.6 to 3 times higher than anticipated for annual emissions because they are based on the potential to emit which reflects values that are higher than anticipated from the facilities historical operation;
4. Because of the factors identified in #2 and #3 the maximum residential receptor risk is anticipated to drop below health benchmarks and the maximum off property receptor risk is also reduced but may not be below health benchmarks; and
5. For the pollutant acrolein, which is one of the primary risk drivers, the analysis does not take into account the reactivity of this compound and the fact that it may exist in different forms that are anticipated to have a lower risk as distance from the facility increases.

Based on these factors and other qualitative data presented in the risk analysis, the risk management recommendation is to allow the facility to be permitted with the higher acrolein limit. The recommendation is also made to encourage the company to move expeditiously to make modifications required under the MACT standards.

Information on the results of this risk analysis will also be shared with the local units of government so that they are aware of outcome of this analysis and will be able to make informed decisions concerning future development in and around the facility.

Documents from the AERA are attached to this document.

### 3.3 Periodic Monitoring

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

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

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

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

**Table 4. Periodic Monitoring**

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
FC Total Facility	Fugitive Emissions Control  Submission of Modeling Information	Recordkeeping	The facility's PTE is > 100 tpy for PM <sub>10</sub> and NO <sub>x</sub> , but the actuals for PM <sub>10</sub> are < 100 and for NO <sub>x</sub> are < 1000 tpy; therefore, the Permittee is not required to perform modeling but must provide modeling information.
GP 001 Furnace and Dryers (EU 001, 002, 003, 030, 031)	PM, PM <sub>10</sub> : ≤ 23.1 lb/hr CO ≤ 53.5 lb/hr VOC: ≤ 35 lb/hr (Limits taken to remain synthetic minor for PSD; 40 CFR 52.21) NO <sub>x</sub> : ≤ 51.3 lb/hr	Re-occurring performance testing  Emissions are controlled by EFBs, ESP – see GP 003 for EFB requirements, and CE 018 for ESP requirements	Permittee to perform initial stack tests for opacity, PM, PM <sub>10</sub> , CO, NO <sub>x</sub> , VOCs and acrolein. Subsequent testing for PM <sub>10</sub> and CO is to be done annually; past test results include some non-compliant results for PM <sub>10</sub> and CO, also CO results have been quite close to emission limit, which is close to PSD threshold. Therefore, it is important to test both PM <sub>10</sub> and CO on a more frequent basis than the other pollutants. Testing for PM, NO <sub>x</sub> VOC and



Emission Unit or Group	Requirement (basis)	Additional Monitoring	Discussion
	<p>(Limit set due to modeling, and to remain synthetic minor for PSD)</p> <p>Opacity: <math>\leq 20\%</math> with exception (Minn. R. 7011.0610)</p> <p>Acrolein: <math>\leq 0.772</math> lb/hr (limit set due to toxics review)</p> <p>Dryer Inlet Temperature <math>\leq 1007</math> °F</p> <p>Fuel usage limits: <math>\leq 23,506</math> lb/hr 12-hr block average (limit set due to performance test); <math>\leq 4000</math> lb/month on-site generated material</p> <p>Dryer Production Throughput limit: <math>\leq 47,305</math> lb/hr 12-hr block average (limit set due to performance test)</p>	<p>Opacity monitor on SV 001 - see CM 001 for requirements</p> <p>Recordkeeping for fuel usage and production throughput limits</p>	<p>acrolein is to be done every 5 years following the initial test. Past test results have been enough below the limit to allow for less frequent testing; also, since PM<sub>10</sub> testing will be done annually, and the PM<sub>10</sub> test results have been higher than PM, PM testing can be done less frequently than the PM<sub>10</sub>.</p> <p>NOx emission limit was originally 51.3 lb/hr, but has been decreased to 35.6 lb/hr with this permit to reflect NOx emissions used in toxics modeling.</p>
GP 002 Systems controlled by baghouses	<p>PM, PM<sub>10</sub>: <math>\leq 0.007</math> gr/dscf (Limits taken to remain synthetic minor for PSD; 40 CFR § 52.21)</p> <p>Opacity: <math>\leq 20\%</math> (Minn. R.</p>	Check of visible emissions on a daily basis; performance testing	<p>Permittee to perform initial stack tests for opacity, PM, PM<sub>10</sub> on two representative baghouses. Subsequent testing for opacity, PM, PM<sub>10</sub> is to be done every 3 years on two representative baghouses. Very little test data is available on the baghouses, so testing every 3 years was set in an effort to collect data on most of the baghouses over the life of the permit.</p>

<b>Emission Unit or Group</b>	<b>Requirement (basis)</b>	<b>Additional Monitoring</b>	<b>Discussion</b>
	7007.0715) PM, PM10 control efficiency $\geq 99\%$		<p>Also subject to Minn. R. 7011.0715; the emission limits are more stringent than allowed by Minn. Rules.</p> <p>Specific testing to verify control efficiency is not needed. Although control efficiencies are to be included in permits, the efficiency condition is enforceable as a practical matter as long as the operating parameters and assumptions depended upon to determine that the control equipment would have a given efficiency are included in the permit. The monitoring and O&amp;M requirements for the control equipment serve this purpose.</p>

GP 003 EFB Requirements	<p>Bed Voltage: <math>\geq 10</math> kV</p> <p>Ionizer Voltage: <math>\geq 20</math> kV</p> <p>Pressure Drop: <math>\geq 1</math> inches water column</p> <p>PM, PM10 control efficiency <math>\geq 80\%</math></p>	Monitoring of bed and ionizer voltage and of pressure drop for EFBs, recordkeeping, O & M, inspections	<p>EFBs are used as particulate control for dryer system. There are 3 EFBs in a parallel configuration; EFB 1 and 2 (CE 005 and 006) go to SV 002, CE 002 goes to SV 004. Trus Joist has in the past operated with the flexibility of operating with just two of the EFBs operating. However, some past tests with only 2 EFBs on line has shown non-compliance with PM10 limits; currently Trus Joist must continue to operate with all 3 on-line. However, Trus Joist has the option of testing to show compliance with a different operating scenario, and then operating as tested.</p> <p>Specific testing to verify control efficiency is not needed. Although control efficiencies are to be included in permits, the efficiency condition is enforceable as a practical matter as long as the operating parameters and assumptions depended upon to determine that the control equipment would have a given efficiency are included in the permit. The monitoring and O&amp;M requirements for the control equipment serve this purpose.</p>
SV 009 Pre-trim Billet Cooler	<p>PM, PM<sub>10</sub>: <math>\leq 0.005</math> gr/dscf (Limits taken to remain synthetic minor for PSD; 40 CFR § 52.21)</p> <p>Opacity: <math>\leq 20\%</math> (Minn. R. 7007.0715)</p> <p>Acrolein: <math>\leq 0.013</math> lb/hr (limit set due to toxics review)</p>	Check of visible emissions on a daily basis; performance testing	<p>Permittee to perform initial stack test for opacity, PM, PM<sub>10</sub> and acrolein. Subsequent testing for opacity, PM, PM<sub>10</sub> is to be done every 5 years.</p> <p>Also subject to Minn. R. 7011.0715; the emission limit is more stringent than allowed by Minn. Rules.</p>
EU 001 4 Cell Furnace	<p>PM: <math>\leq 0.10</math> lb/MMBtu</p> <p>Opacity: <math>\leq 20\%</math> with exception (40 CFR § 60.43b)</p>	Operation of COMS (requirements in permit under CM 001); re-occurring performance testing	Permittee to perform initial stack test for PM. Subsequent testing for PM is to be done every 3 years. Testing for compliance with NSPS, and monitoring for opacity with COMS, is done at SV 001, stack from thermal oil heater. Exhaust

			from furnace goes both to dryer system and to thermal oil heater; however, dryers produce additional particulates which are mixed with furnace emissions. Monitoring of the exhaust from the thermal oil heater is assumed to be sufficient to monitor furnace's compliance with NSPS. Note: see also GP 001, as EU 001 is part of that group.
EU 005 Billet Press	<p>PM, PM<sub>10</sub>: <math>\leq 8.32</math> lb/hr</p> <p>VOC: <math>\leq 13.6</math> lb/hr</p> <p>(Limits taken to remain synthetic minor for PSD; 40 CFR § 52.21)</p> <p>Opacity: <math>\leq 20\%</math> (Minn. R. 7011.0715)</p> <p>MDI <math>\leq 0.27</math> lb/hr; Acrolein: <math>\leq 0.013</math> lb/hr</p> <p>(Minn. R. 7007.0800, subp. 2 – limit set due to air toxics review)</p> <p>Superheater outlet temperature: <math>\geq 200</math> °F</p>	<p>Re-occurring performance testing</p> <p>Temperature monitoring</p>	Permittee to perform initial stack test for opacity, PM, PM <sub>10</sub> , VOC, MDI and acrolein. Subsequent testing for opacity, PM, PM <sub>10</sub> , VOC and MDI is to be done every 5 years.
EU 032 Back-up Thermal Oil Heater	<p>Natural gas usage: <math>\leq 210</math> million cubic feet/year, 12-month rolling sum basis</p> <p>(Limits taken to remain synthetic minor for PSD; 40 CFR § 52.21)</p>	Recordkeeping: daily usage records; monthly fuel records	This emission unit is subject to NSPS Subp. Dc; since it burns only natural gas, there are no limits for pollutants such as PM, NO <sub>x</sub> or opacity.
CE 018 ESP (on emissions from thermal oil heater)	<p>ESP: <math>\geq 1</math> field on-line</p> <p>PM, PM<sub>10</sub> control efficiency <math>\geq 80\%</math></p>	Monitoring of number of fields on-line, recordkeeping, O & M, inspections	Specific testing to verify control efficiency is not needed. Although control efficiencies are to be included in permits, the efficiency condition is enforceable as a practical matter as long as the operating

			parameters and assumptions depended upon to determine that the control equipment would have a given efficiency are included in the permit. The monitoring and O&M requirements for the control equipment serve this purpose.
CM 001 COMS on SV 001 (thermal oil heater, ESP)	Operation of COMS (40 CFR § 60.48b(a))		Operation of COMS required by NSPS Subp. Db

### **3.4 Insignificant Activities**

Trus Joist has several operations which are classified as insignificant activities. These are listed in Appendix B to the permit.

### **Permit Organization**

In general, the permit meets the MPCA Delta Guidance for ordering and grouping of requirements. One area where this permit deviates slightly from Delta guidance is in the use of appendices. While appendices are fully enforceable parts of the permit, in general, any requirement that the MPCA thinks should be tracked (e.g., limits, submittals, etc.), should be in Table A or B. The main reason is that the appendices are word processing sections and are not part of the tracking system. Violation of the appendices can be enforced, but the computer system will not automatically generate the necessary enforcement notices or documents. Staff must generate these.

### **3.5 Comments Received**

Public Notice Period: June 3, 2005 – July 5, 2005

EPA 45-day Review Period: August 11, 2005 – September 26, 2005

Comments were received from Trus Joist during the public notice period. Those comments, along with the MPCA responses, are attached to this document. The MPCA responses describe any changes made to the permit. The list of insignificant activities, Appendix B of the permit, has been updated to include activities described in the notification submitted by Trus Joist dated July 26, 2005. No comments were received from EPA during their 45-day review period.

#### **4. Conclusion**

Based on the information provided by Trus Joist, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 03500031-001, and this TSD, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team:      Paula Connell, P.E. (permit writer/engineer)  
   David Crowell (enforcement)  
   Dan Sullivan (peer reviewer)

Attachments:    1. Calculation Spreadsheets  
                         2. Facility Description and CD-01 Forms  
                         3. AERA documents  
                         4. Trus Joist comments with MPCA responses