

AIR EMISSION PERMIT NO. 13700031- 003

IS ISSUED TO

Georgia-Pacific Corporation

Georgia-Pacific - Duluth Hardboard
1220 West Railroad Street
Duluth, St. Louis County, MN 558160267

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	April 17, 1995 / June 26, 1995
Major Amendment	October 18, 1999
Major Amendment	April 16, 2001

This permit authorizes the Permittee to operate and modify 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; Synthetic Minor PSD/NSR

Issue Date: March 12, 2002

Expiration: September 18, 2003
All Title I Conditions do not expire.

Ann Foss
Major Facilities Section Manager
Majors and Remediation Division

for Karen A. Studders
Commissioner
Minnesota Pollution Control Agency

TRW:kmt

TABLE OF CONTENTS

Notice to the Permittee

Permit Shield

Facility Description

Table A: Limits and Other Requirements

Table B: Submittals

Appendices: Attached and Referenced in Table A

NOTICE TO THE PERMITTEE:

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

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

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

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

PERMIT SHIELD:

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

Georgia-Pacific Corporation owns and operates a hardboard manufacturing plant at 1220 West Railroad Street in Duluth, Minnesota. The plant is located on a 18.27 acre site in a developed portion of the City of Duluth. To the southeast, the site borders Slip C, in the Duluth Harbor. To the north and west, the site borders railroad yards and other industrial facilities. The plant employs approximately 210 people and operates 24 hours per day 365 days per year.

The facility currently operates two wet process hardboard lines designated as lines 3 and 5. A third (line 2) and fourth (line 4) wet process lines were taken out of production in 1997. Wood raw material for hardboard production comes from whole tree chips, board and lumber mill residue, and other available wood resources. After being trucked to the site, the wood is screened, conveyed to the mill, washed, steamed, and refined into wood fiber. The wood fiber then mixes with process chemicals, is formed into mats and is pressed into panels. The resulting panels are humidified, and may be trimmed, cut, sanded, perforated, laminated, or painted, depending on final product requirements. The finished products are packed for shipment by truck and rail.

There are five boilers producing steam at the facility. Three are oil and natural gas boilers, one is a wood, oil or natural gas boiler, and one is a wood only boiler. The two wood-fired boilers and one of the oil/natural gas boilers are ducted to an Electrostatic Precipitator (ESP) for abatement of emissions. Currently two (of a previous five) standby diesel generators provide electricity as needed. Various bag filters and one cyclone collect wood material from raw materials handling, sanding, sawing, and other operations for use as fuel in the mills wood boilers.

In a permit issued on May 4, 2000, Georgia-Pacific modified Boiler #5 by adding an air heater to the forced combustion air system. The air heater was expected to improve the combustion efficiency of the boiler allowing the boiler to fire more of the green wood waste generated from the manufacturing process. The PM emissions were limited to keep the modification a synthetic minor for Prevention of Significant Deterioration (PSD). Georgia-Pacific also proposed to combust wood sugar molasses in the boiler. This fuel was added as an alternate fuel in the permit. The amount of molasses that could be burned was limited so that the SO₂ emissions from the modification were below 40 tons per year keeping the modification a synthetic minor for PSD.

With this permit Georgia-Pacific is requesting approval to burn more wood molasses at the facility. They want to add this additional capacity to Boiler #3. Both Boiler #3 and #5 (along with #4) vent to a common ESP and stack. In the time since the last permit, the facility removed a significant percentage of a sulfur containing-chemical (aluminum sulfate) from the molasses stream.

Recently the sister facility to this one, located in Superior, WI, closed. Some of the painted hardboard business produced there will be moved to the Duluth plant. As a result, the paintline at the Duluth facility will be modified. Since the Volatile Organic Compound (VOC)-containing materials are applied with a roller coater, the only pollutant emissions are VOC and hazardous air pollutants. Synthetic minor limits are proposed by Georgia-Pacific to make this change a non-major modification under PSD. This change will be included in this permit action.

For more details on this, and other changes made with this amendment, see the technical support document for this permit.

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard
 Permit Number: 13700031 - 003

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

Subject Item: Total Facility

What to do	Why to do it
Comply with the O & M Plan: Follow the actions and recordkeeping specified in the O & M plan. The plan may be amended by the Commissioners written approval.	Minn. R. 7007.0800, subp. 14; Minn. R. 7007.0800, subp. 16(J)
Comply with the Fugitive Control Plan: Follow the actions and recordkeeping specified in the fugitive control plan. The plan may be amended with the Commissioners approval. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150, or fugitive control plan, then the Permittee may be required to amend the fugitive control plan.	Minn. R. 7011.0150
Insignificant Activities Identification (as of the time of permit issuance): Attachment 1 of the appendix material to this permit contains a list of insignificant activities at the plant. This list does not include every insignificant activity and is subject to change.	Minn. R. 7007.0800, subp. 2
List of Regulations Not Applicable (as of the time of permit issuance): Attachment 2 of the appendix material to this permit contains a list of regulations not applicable to the plant. This list does not include every rule that is not applicable.	Minn. R. 7007.0800, subp. 2
Operation and Maintenance Plan: This Plan has been submitted. The Plan summarizes the operation and maintenance for all pollution control equipment. The plan should consider manufacturer's recommended ranges for control equipment operating parameters such as pressure drop, liquid flow rate, and liquid supply pressure; corrective action procedures to return control equipment parameters to within specified range(s); corrective action procedures to be followed in the event of a malfunction or breakdown; a description of inspection procedures to be followed; and records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as specified by Minn. R. 7017.2025 following formal review of a subsequent performance test on the same unit.	Minn. R. 7017.2025
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
<p>Shutdowns: 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

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

<p>Breakdowns: 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>	<p>Minn. R. 7019.1000, subp. 2</p>
<p>Notification of Deviations Endangering Human Health or the Environment: In the event of any deviation, as defined in part 7007.0100, subpart 8a, which could endanger human health or the environment, notify, orally or in writing, the commissioner or the state duty officer as soon as possible after discovery of the deviation. Within two working days of the discovery, submit to the commissioner a written description of the deviation stating:</p> <p>A. the cause of the deviation;</p> <p>B. the exact dates of the period of the deviation, if the deviation has been corrected;</p> <p>C. whether or not the deviation has been corrected;</p> <p>D. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and</p> <p>E. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.</p>	<p>Minn. R. 7007.0800, subp. 6(A) and Minn. R. 7019.1000, subp. 1</p>
<p>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.</p>	<p>Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)</p>
<p>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.</p>	<p>Minn. R. 7011.0150</p>
<p>Fugitive Control Plan: The Plan was submitted, for review and approval, after issuance of the Title V permit. The plan was required to identify fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. The plan may be amended by the Permittee with the Agency's approval. If the Agency determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the Permittee may be required to amend the control plan and/or install and operate particulate matter ambient monitors.</p>	<p>Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2</p>
<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>	<p>Minn. R. 7007.1150 through Minn. R. 7007.1500</p>
<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>	<p>Minn. R. 7007.1400, subp. 1(H)</p>
<p>Record keeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350 subp. 2), including records of the emissions resulting from those changes.</p>	<p>Minn. R. 7007.0800, subp. 5(B)</p>
<p>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 strip-chart recordings for continuous monitoring instrumentation, fuel supplier certifications of sulfur content and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).</p>	<p>Minn. R. 7007.0800, subp. 5(C)</p>
<p>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 federally enforceable or enforceable by citizens under the Act.</p>	<p>Minn. R. 7030.0010 - 7030.0080</p>
<p>The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.</p>	<p>Minn. R. 7007.0800, subp. 16</p>
<p>Inspections: Upon presentation of credentials and other documents as may be required by law, allow the Agency, or its representative, to enter the Permittee's premises to have access to and copy any records required by this permit, to inspect at reasonable times (which include any time the source is operating) any facilities, equipment, practices or operations, and to sample or monitor any substances or parameters at any location.</p>	<p>Minn. R. 7007.0800, subp. 9(A)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095
The Permittee may be required to submit a Risk Management Plan (RMP) under the federal rule, 40 CFR pt. 68 which was promulgated on June 20, 1996. The rule will require each owner or operator of a stationary source, at which a regulated substance is present above a threshold quantity in a process, to design and implement an accidental release prevention program. The RMPs must be submitted to a centralized location as specified by US EPA. The Permittee may obtain the RMP submittal information at http://www.epa.gov/swercepp or by calling 1-800-424-9346. These requirements must be complied with no later than the latest of the following dates: (1) June 21, 1999; (2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or (3) The date on which a regulated substance is first present above a threshold quantity in a process.	40 CFR pt. 68

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: GP 001 Board line process exhaust (post 1969)

- Associated Items:**
- EU 002 Primary Grinder 1 w/Steam Separator
 - EU 003 Primary Grinder 2 w/Steam Separator
 - EU 004 Primary Grinder 3 w/Steam Separator
 - EU 005 Primary Grinder 4 w/Steam Separator
 - EU 024 Line 5 Press
 - EU 025 Line 5 Unloading Hoist
 - SV 001
 - SV 002
 - SV 003
 - SV 004
 - SV 022
 - SV 023

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: GP 002 Board line process exhaust (pre 1969)

Associated Items: EU 015 Line 3 Press

EU 016 Line 3 Unloading Hoist

SV 013

SV 014

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0710, subp. 1(A)
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for four minutes in any 60-minute period, and that a maximum of 40 percent opacity shall be permissible for four additional minutes in any 60-minute period (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0710, subp. 1(B)

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: GP 003 Diesel Electric Generators

Associated Items: EU 046 Engine Generator 1

EU 047 Engine Generator 2

SV 032

SV 033

What to do	Why to do it
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.2300, subp. 2
Sulfur Content of Fuel: less than or equal to 0.475 percent by weight in the distillate fuel oil burned in EU 046 through EU 050.	Minn. R. 7007.0800, subp. 2
Total EU 046 and EU 047 Fuel Usage: less than or equal to 129,810 gallons/year using 12-month Rolling Sum	Title I Condition: limit set to restrict potential NOx emissions increases to less than significant as defined by 40 CFR Section 52.21
Monitoring: the Permittee shall monitor the fuel flow to EU 046 and EU 047 in gallons per month using the existing fuel flow gauge to these units.	Minn. R. 7007.0800, subp. 4
Record Keeping: by the 15th day of each month the Permittee shall calculate and record the total distillate fuel oil usage for EU 046 and EU 047 for the previous month and for the previous 12-month period.	Minn. R. 7007.0800, subp. 5
Fuels Allowed: distillate fuel oil only	Minn. R. 7007.0800, subp. 2
Fuel Supplier Certification Record Keeping: the Permittee shall retain all records of fuel supplier certifications of sulfur content of the fuel oil delivered and used in EU 046 and EU 047. Retain all records at the stationary source for a period of five (5) years from the date of delivery.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: GP 004 Wood Waste Handling Operations

- Associated Items:** CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 CE 004 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 CE 005 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 CE 007 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 CE 011 Fabric Filter - Low Temperature, i.e., T<180 Degrees F
 EU 036 Saws (north baghouse)
 EU 037 Saws (south baghouse)
 EU 038 AEM Sander Baghouse
 EU 039 Timesaver Sander Baghouse
 EU 052 Boiler Dust Handling System Baghouse
 SV 026
 SV 027
 SV 028
 SV 029
 SV 039

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735 (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity (this limit applies individually to each emission unit listed above under Associated Items).	Minn. R. 7011.0715, subp. 1(B)
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
Visible Emissions Observation: the Permittee shall observe the emissions from each stack vent listed above under Associated Items (during daylight hours) for visible emissions of particulate matter once each day while in operation. The observers are not required to be Method 9 certified opacity readers.	Minn. R. 7007.0800, subp. 4
Visible Emissions Corrective Actions: If visible emissions (VEs) are observed the Permittee shall determine the cause and take corrective actions as soon as possible to eliminate the VEs. Corrective action may be in the form of discontinuing venting emissions to the atmosphere through the control equipment.	Minn. R. 7007.0800, subp. 2
Visible Emissions Recordkeeping: the Permittee shall record the time and date of each VE inspection, and whether or not any VEs were observed. If VEs were observed, also record a brief description of the type of corrective actions taken, and the date the actions were taken.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: SV 025

Associated Items: EU 033 Boiler 3

EU 034 Boiler 4

EU 035 Boiler 5

MR 001

What to do	Why to do it
LIMITS	hdr
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for six minutes in any 60-minute period	Minn. R. 7011.0510, subp. 2
Sulfur Dioxide: less than or equal to 38 tons/year using 365-day Rolling Sum from the burning of molasses. This limit is for the emissions from the burning of molasses, as calculated below.	Title I Condition: Emission limit to keep modification non-major under PSD; Minn. R. 7007.3000; Minn. R. 7007.0800, subp.2
<p>CALCULATING EMISSIONS</p> <p>For each calendar day calculate the emissions of SO₂ from burning molasses according to the following equations:</p> $E_{SO_2} = ([\%S * 5.9] \text{lb SO}_2/\text{MMBtu} * \text{Md})/2000$ <p>E_{SO₂} = SO₂ emissions, ton/day %S = percent sulfur in the molasses, assumed to be 0.10 unless shown otherwise (see below under Sample Analysis) Md = total heat input from molasses burned that day in boilers #3 and #5, MMBtu/day</p> <p>If no molasses was burned in either boiler #3 or #5, then record emissions of zero for each pollutant for that day.</p>	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4&5
<p>CALCULATING EMISSIONS - continued</p> <p>For SO₂ above, calculate the 365-day rolling sum by adding the emissions from the last 364 days with those calculated above for the current day.</p> <p>For the first 364 days after permit issuance, previous fuel use records shall be used to determine the 365-day rolling sums.</p>	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4&5
Steam Flow: less than or equal to 43200 lbs/hour using 8-hour Block Average for boilers 4 & 5 combined or as determined during the most recent performance test.	Minn. R. 7017.2025, subp. 3
TESTING	hdr
Sample Analysis: due 180 days after end of each calendar year following Permit Issuance a proximate analysis shall be run on a molasses sample, unless no molasses was burned during that year. The molasses sample shall be a composite of grab samples taken once each day over a 5-day period. If a 5-day period of molasses burning can not be identified, 1 non-consecutive grab sample can be taken each day molasses is burned until 5 grab samples are obtained. The %S of the sample shall be used in the emission calculations above if the result is greater than 0.10%S. The heat content of the sample shall be used in the emission calculations above.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
Notify: due 15 days after Initial Startup of burning molasses in boiler #3, the date molasses burning commenced in boiler #3.	Title I Condition: Notification associated with Title I emission limit; Minn. R. 7007.0800, subp. 6
Initial Performance Test: due 180 days after Initial Startup of the burning of molasses in Boiler #3 to determine Total Particulate Matter and Particulate Matter less than 10 microns emissions. Boiler #3 shall be operated on gas and molasses, Boiler #4 shall be operated on wood, and Boiler #5 shall be operated on wood and molasses. The emission factors developed shall be used in calculating emissions under EU 035 and shall be reported in lb/MMBtu, calculated based on the non-gas rated heat input of all fuels burned in all boilers during the test. The results of this test will also be compared with the M.R. ch 7011 emission limit on a total rated heat input basis.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
Performance Test: due 730 days after Initial Performance Test and again once every subsequent 730 day (2 year) period for Particulate Matter and Particulate Matter less than 10 microns emissions.	Title I Condition: Testing associated with Title I emission limit; Minn. R. 7017.2020, subp. 1
<p>Operating Conditions for Performance Tests:</p> <p>The performance tests shall be conducted with Boilers 3, 4, and 5 all operating at 90% of capacity or greater. In the event that the emissions at SV025 exceed the Minn. R. ch. 7011 limits that apply to Boilers 3, 4, and 5, all boilers will be assumed to be in exceedance of the applicable limit.</p>	Minn. R. 7017.2020

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Performance Test Pre-test Meeting: due 7 days before Initial Performance Test and each subsequent Performance Test to determine Particulate Matter less than 10 micron emissions.	Minn. R. 7017.2030, subp. 4
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 031 Boiler 1**Associated Items: SV 024**

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for six minutes in any 60-minute period.	Minn. R. 7011.0510, subp. 2
Fuels Allowed: Distillate fuel oil, residual fuel oil, and natural gas.	Minn. R. 7007.0800, subp.2
Record Keeping: the Permittee shall retain records sufficient enough to demonstrate what fuel types were combusted in EU 031.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 032 Boiler 2**Associated Items: SV 024**

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input	Minn. R. 7011.0510, subp. 1
Opacity: less than or equal to 20 percent opacity except that a maximum of 60 percent opacity shall be permissible for six minutes in any 60-minute period.	Minn. R. 7011.0510, subp. 2
Fuels Allowed: Distillate fuel oil, residual fuel oil, and natural gas.	Minn. R. 7007.0800, subp.2
Record Keeping: the Permittee shall retain records sufficient enough to demonstrate what fuel types were combusted in EU 032.	Minn. R. 7007.0800, subp. 5

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 033 Boiler 3**Associated Items:** CE 001 Electrostatic Precipitator - High Efficiency

SV 025

SV 037

What to do	Why to do it
Fuels Allowed: Distillate fuel oil, residual fuel oil, used oil, natural gas, and wood sugar molasses.	Minn. R. 7007.0800, subp.2
Record Keeping: the Permittee shall retain records sufficient enough to demonstrate what fuel types were combusted in EU 033.	Minn. R. 7007.0800, subp. 5
Operation of CE 001and CE 002: when combusting wood sugar molasses in EU 033, the Permittee shall operate CE 001 and vent EU 033 emissions to CE 001. When EU 033 is combusting wood sugar molasses, emissions shall not be vented to SV 037.	Minn. R. 7007.0800, subp. 14

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 034 Boiler 4

Associated Items: CE 001 Electrostatic Precipitator - High Efficiency

SV 025

SV 037

What to do	Why to do it
<p>Fuels Allowed: wood waste, distillate fuel oil, and natural gas. Wood waste consists of any combination of the following wood materials; chips, hardboard, sander dust, saw trim, filter press residue, fiber, and other board/mill waste generated from the screening of hardboard furnish and production or finishing of hardboard. The G-P Duluth hardboard manufacturing process has the ability to use process waste from other wood products mills as furnish for board production. A percentage of all furnish is rejected by the various screening and chip wash systems and becomes wood waste fuel. Other solid fuels (defined as manufacturing residue) include; dried wax, resins, and sealers generated as a waste product of the manufacturing process, not to exceed 2% by weight of the total solid fuel burned on a annual basis.</p>	<p>Minn. R. 7007.0800, subp.2</p>
<p>Record Keeping: The total weights of the manufacturing residue added to the boiler fuel stream shall be recorded monthly. A monthly average shall be determined based on the ratio of manufacturing residue and/or absorbent material placed in the fuel stream to the total calculated amount of fuel fed to the boilers.</p>	<p>Minn. R. 7007.0800, subp. 5</p>
<p>Operation of CE 001: when combusting wood waste in EU 034, the Permittee shall operate CE 001 and vent EU 034 emissions to CE 001. When EU 034 is combusting wood waste, emissions shall not be vented to SV 037.</p>	<p>Minn. R. 7007.0800, subp. 14</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 035 Boiler 5

Associated Items: CE 001 Electrostatic Precipitator - High Efficiency
 CE 002 Multiple Cyclone w/o Fly Ash Reinjection - Most Multiclones
 SV 025
 SV 037

What to do	Why to do it
Total Particulate Matter: less than or equal to 23 tons/year using 365-day Rolling Sum	Title I Condition: Emission limit to keep modification non-major under PSD; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
Particulate Matter < 10 micron: less than or equal to 13 tons/year using 365-day Rolling Sum	Title I Condition: Emission limit to keep modification non-major under PSD; Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 2
<p>CALCULATING EMISSIONS</p> <p>For each calendar day calculate the emissions of PM, PM10 from boiler #5 according to the following equations:</p> <p>$E_{pm} = (0.24 \text{ lb PM/MMBtu} * Md)/2000$ $E_{pm10} = (0.14 \text{ lb PM10/MMBtu} * Md)/2000$</p> <p>$E_{pm}$ = PM emissions, ton/day E_{pm10} = PM10 emissions, ton/day Md = total heat input from all fuels burned that day in boiler #5, MMBtu/day</p> <p>If no fuel was burned in boiler #5, then record emissions of zero for each pollutant for that day.</p> <p>When a new performance test is conducted for PM and/or PM10, the new test results (lb/MMBtu) shall be used in the formula(s) above (in place of the previous rates) beginning on the first day following the receipt of a performance test approval letter from the MPCA.</p>	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4&5
<p>CALCULATING EMISSIONS - continued</p> <p>For each pollutant above, calculate the 365-day rolling sum by adding the emissions from the last 364 days with those calculated above for the current day.</p> <p>For the first 364 days after permit issuance, previous fuel use records shall be used to determine the 365-day rolling sums.</p>	Title I Condition: Monitoring associated with Title I emission limit; Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4&5
<p>Fuels Allowed: wood waste, used cellulose-based oil sorbents, used oil generated on site, and wood sugar molasses. The total of all of the previous fuels shall not exceed 2% by weight of the total solid fuel burned on an annual basis.</p> <p>Wood waste consists of any combination of the following wood materials; chips, hardboard, sander dust, saw trim, filter press residue, fiber, and other board/mill waste generated from the screening of hardboard furnish and production or finishing of hardboard. The G-P Duluth hardboard manufacturing process has the ability to use process waste from other wood products mills as furnish for board production. A percentage of all furnish is rejected by the various screening and chip wash systems and becomes wood waste fuel. Other solid fuels (defined as manufacturing residue) include; dried wax, resins, and sealers generated as a waste product of the manufacturing process.</p>	Minn. R. 7007.0800, subp.2
<p>Record Keeping: The total weights of the manufacturing residue added to the boiler fuel stream shall be recorded monthly. A monthly average shall be determined based on the ratio of manufacturing residue and/or absorbent material placed in the fuel stream to the total calculated amount of fuel fed to the boilers.</p>	Minn. R. 7007.0800, subp. 5
<p>Operation of CE 001and CE 002: the Permittee shall operate CE 001 and CE 002 at all times that EU 035 is operating.</p>	Minn. R. 7007.0800, subp. 14
<p>Recording and Recordkeeping: The Permittee shall record and maintain records of the amounts of each fuel combusted during each day. The records shall be maintained by the Permittee for a period of two years following the date of such record.</p>	40 CFR Section 60.48c(g) and (i)

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: EU 041 Priming & Painting Line

Associated Items: SV 030

What to do	Why to do it
<p>MACT REQUIREMENTS NOTE: the following MACT requirements apply only when the Painting and Priming Line is producing furniture components. The state requirements apply at all times.</p>	<p>hdr</p>
<p>Coatings HAP Content: less than or equal to 0.8 lb VHAP/lb solids, as applied, as a weighted average for all coatings.</p>	<p>40 CFR Section 63.802(a)(1); Minn. R. 7011.7340</p>
<p>Adhesives HAP Content: less than or equal to 0.8 lb VHAP/lb solids, as applied.</p>	<p>40 CFR Section 63.802(a)(2); Minn. R. 7011.7340</p>
<p>Work Practice Standard: The Permittee shall prepare and maintain a written work practice implementation plan that defines environmentally desirable work practices for each wood furniture manufacturing operation and addresses each of the work practice standards presented in paragraphs (b) through (l) of Section 63.803. The work practice implementation plan has been submitted to the MPCA.</p>	<p>40 CFR Section 63.803(a); Minn. R. 7011.7340</p>
<p>Monitoring: The Permittee shall calculate the average VHAP content for all finishing materials at the facility using the equation at Section 63.804 (a)(1), and maintain a value of E no greater than 0.8. The Permittee shall also keep records showing the VHAP content of the adhesives used.</p>	<p>40 CFR Section 63.804(a) and (c); Minn. R. 7011.7340</p>
<p>Reporting: The Permittee shall submit the results of the averaging calculation for the first month with the initial compliance status report. This was received by the MPCA on May 25, 2001.</p>	<p>40 CFR Section 63.804(f); Minn. R. 7011.7340</p>
<p>Performance Test Methods: EPA Method 311 of appendix A of part 63 shall be used in conjunction with formulation data to determine the VHAP content of the liquid coatings.</p>	<p>40 CFR Section 63.805(a); Minn. R. 7011.7340</p>
<p>Recordkeeping: The Permittee shall maintain all records specified by Section 63.806.</p>	<p>40 CFR Section 63.806; Minn. R. 7011.7340</p>
<p>Reporting: Include with each semiannual deviation report the relevant information concerning the compliance status of the facility with respect to 40 CFR Section 63, subp. JJ. Specifically include the results of the averaging calculation for each month within the semiannual period and the information required by Section 63.804(f)(1), (2), (3), (5), (7), (8) and Section 63.804(g)(1), (2), (3), (5), (7), (8). Also include a statement whether the affected source was in compliance or noncompliance, and, if in noncompliance, the measures taken to bring the affected source into compliance.</p>	<p>40 CFR Section 63.807; Minn. R. 7011.7340</p>
<p>SYNTHETIC MINOR REQUIREMENTS</p>	<p>hdr</p>
<p>Volatile Organic Compounds: less than or equal to 35.0 tons/year using 12-month Rolling Sum</p>	<p>Title I Condition: Emission limits taken to keep modification non-major under PSD; 40 CFR Section 52.21; Minn. R. 7007.3000</p>
<p>Monitoring: by the 15th day of the month, calculate the VOC emissions for the previous month from the paintline using a mass balance approach (i.e. the VOC from material used is assumed to be emitted to the ambient air). No credit is allowed for the recycling of off-spec material. Also calculate the new 12-month rolling sum of VOC emissions from the paintline by the 15th day of the month. Previous operating records shall be used in the calculation of the 12-month rolling sum of VOC emissions from the paintline for the first 11 months after permit issuance.</p>	<p>Title I Condition: Emission limits taken to keep modification non-major under PSD; 40 CFR Section 52.21; Minn. R. 7007.3000</p>
<p>STATE REQUIREMENTS</p>	<p>hdr</p>
<p>Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735</p>	<p>Minn. R. 7011.0715, subp. 1(A)</p>
<p>Opacity: less than or equal to 20 percent opacity</p>	<p>Minn. R. 7011.0715, subp. 1(B)</p>

TABLE A: LIMITS AND OTHER REQUIREMENTS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

Subject Item: CE 001 Electrostatic Precipitator - High Efficiency

Associated Items: EU 033 Boiler 3

EU 034 Boiler 4

EU 035 Boiler 5

What to do	Why to do it
Operate CE 001 when either EU 033, 034, and/or 035 (boiler 3, 4, and 5, respectively) are operating except when burning only natural gas or distillate fuel oil.	Minn. R. 7007.0800, subp. 2
CE 001 must be operated with at least the minimum specific collection area (SCA) in service determined during the most-recent particulate matter emissions test with results equal to or less than the particulate matter emission limit. If the ESP sections in CE 001 are physically and electrically equivalent, the Permittee can meet this requirement by operating the ESP with no less than the number of sections that were operating during the most-recent particulate matter emissions test with results equal to or less than the particulate matter emission limit.	Minn. R. 7007.0800, subp. 14
Monitor and record the identity and minimum number of ESP sections (or SCA if sections are not equivalent) in service each day that the ESP is operating.	Minn. R. 7007.0800, subp. 4 and 5

TABLE B: SUBMITTALS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard
Permit Number: 13700031 - 003

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

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Computer Dispersion Modeling Information	due 180 days after Permit Issuance submit modeling data as specified in MPCA guidance for Modeling Information Requests for SO ₂ , NO _x , and PM-10. 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
Performance Test Notification (written)	due 30 days before Initial Performance Test and each subsequent Performance Test to determine Particulate Matter less than 10 micron emissions.	SV025
Performance Test Plan	due 30 days before Initial Performance Test and each subsequent Performance Test to determine Particulate Matter less than 10 micron emissions.	SV025
Performance Test Report - Microfiche Copy	due 105 days after Initial Performance Test and each subsequent Performance Test to determine Particulate Matter less than 10 micron emissions.	SV025
Performance Test Report	due 45 days after Initial Performance Test and each subsequent Performance Test to determine Particulate Matter less than 10 micron emissions.	SV025

TABLE B: RECURRENT SUBMITTALS

03/12/02

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031 - 003

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following Permit Issuance . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report period of each calendar year covers January 1 - June 30. The second report period 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. The EPA copy shall be sent to: Mr. George Czerniak, Chief, Air Enforcement and Compliance Assurance Branch, Air and Radiation Division, EPA Region V, 77 West Jackson Boulevard, Chicago, Illinois 60604	Total Facility
Emissions Inventory Report	due 91 days after end of each calendar year following Permit Issuance (April 1). To be submitted on a form approved by the Commissioner.	Total Facility

APPENDIX MATERIAL - ATTACHMENT 1

Facility Name: Georgia-Pacific - Duluth Hardboard

Permit Number: 13700031-003

Insignificant Activities Identification:

The following is a list of activities that are considered insignificant per Minn. R. 7007.1300. This list does not include every insignificant activity and is subject to change.

<u>Process or Activity</u>	<u>Unit ID#</u>	<u>Reason for Insignificance</u>
Screw Press 1 - 4	EU 006 - EU 009	7007.1300 Subp 4. PTE of VOC, PM and PM10 emissions less than 2.28 lb/hr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Vacuum Pump Line 3 Vacuum Pump Line 5	EU 014 EU 018	7007.1300 Subp 4. PTE of VOC, PM and PM10 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Line 3 Humid Kiln	EU 018	7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Screen Blowing - Line 3 Blowing - Line 5	EU 028 EU 030	7007.1300 Subp 2 D. (3). Equipment venting Screen PM or PM10 emissions inside a building 100% of the time and no filtering system in place. Indoor process with no stack or vent. And 7007.1300 Subp 4. PM and PM10 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr.
Wood Fuel Bin Baghouse Reclaim Baghouse	EU 051	7007.1300 Subp 4. PTE of PM and PM 10 Hardboard emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. No HAPs.
Pin Chip Removal Cyclone	EU 053	7007.1300 Subp 4. PTE of PM and PM 10 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. No HAPs.
Laminator	EU 042	7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.

Insignificant Activities List
 Georgia-Pacific - Duluth Hardboard
 Page 2

Evaporator	EU 044	7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Wet Chip Storage Bins	IA 01	7007.1300 Subp 4. PTE of PM and PM10 emissions less than 2.28 lb/hr. No HAPs.
Screen Burning - Line 3 Burning - Line 5	IA 02 IA 04	7007.1300 Subp 4. PTE of CO, VOC, PM, Screen PM10, and SO2 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Line 5 Screen Cleaning Oven	IA 05	7007.1300 Subp 4. PTE of CO, VOC, PM, PM10, and SO2 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Paint Roller Parts Cleaner	IA 06	7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr.
Diesel AST's	IA 08	7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr and actual emissions less than 1.0 tons/yr.
Board Surfacing Torit Filter	IA 10	7007.1300 Subp 4. PTE of PM and PM 10 emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr.
Maintenance Degreasing Activities Washers)		7007.1300 Subp 4. PTE of VOC emissions less (Parts than 2.28 lb/hr.
Maintenance Painting Activities Board Marking Painting Activities		7007.1300 Subp 4. PTE of VOC emissions less than 2.28 lb/hr and actual emissions less than 1.0 ton/yr. Combined HAPs < 1 ton and HAPs PTE < 25% of threshold.
Propane Space Heaters		7007.1300 Subp 3. A. Space heaters fueled by propane.
Woodyard Slow Speed Grinder		7007.1300 Subp 4. PTE of PM and PM 10 emissions less than 2.28 lb/hr.

Attachment 2

Regulations determined not applicable to Georgia-Pacific, Duluth, Minnesota

State Inapplicable Regulations

Regulation	Regulation Description	Reason for Inapplicability
Part 7007.0501	Additional Requirements for Waste Combustors.	Combustion Units which burn wood waste are not waste combustors. Refer to Part 7011.1201 subp. 46.
Part 7011.0555	Incorporates by reference federal NSPS for fossil fuel fired steam generators > 250 MMBTU/H.	Facility has no steam generating unit > 250 MMBTU/H.
Part 7011.0560	Incorporates by reference federal NSPS for electric utility steam generators.	Facility has no electric utility steam generators.
Part 7011.0565	Incorporates by federal NSPS for steam generators > 100 MMBTU/H.	Facility has no steam generators > 100 MMBTU/H.
Part 7011.0570	Incorporates by reference federal NSPS for steam generators 10 - 100 MMBTU/H for which construction commenced after June 9, 1989.	Facility has not installed or modified steam generating units since June 9, 1989.
Part 7011.0600	Provides emission standards for direct heating fossil fuel burning equipment.	Facility does not operate direct heating fuel burning equipment.
Parts 7011.1201 to 7011.1300	Standards of Performance for Waste combustors.	Combustion units which burn wood waste are not subject to this rule.
Part 7011.2450	Provides standards of performance for Kraft Mills.	G-P Duluth does not operate a Kraft mill.
Part 7011.3150	Provides standards of performance for flexible vinyl and urethane coating and printing.	G-P Duluth does not apply flexible vinyl or urethane coatings.
Part 7011.9990	Provides volatile hazardous air pollutant emission standards for equipment leaks.	G-P Duluth does not operate equipment in volatile hazardous air pollutant service.

Federal Inapplicable Regulations

Regulation	Regulation Description	Reason for Inapplicability
40 CFR 60 Subpart Ka 60.110a - 60.115a	Standards of performance for storage vessels for petroleum liquids built or modified after May 18, 1978, and July 23, 1984.	Facility has no petroleum storage vessels > 40,000 gallons built between May 18, 1978, and July 23, 1984.
40 CFR 60 Subpart Kb 60.110b - 60.117b	Standard of performance for volatile organic liquid vessels built or modified after July 23, 1984.	Facility has no petroleum storage vessels with capacity > 10,568 gallons built or modified after July 23, 1984.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 13700031-003

This technical support document 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 draft 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 (list both if different)	Facility Address (SIC Code: 2493)
Georgia-Pacific Corporation 133 Peachtree Street Northeast P.O. Box 105605 Atlanta, Georgia 30348-5605	Georgia-Pacific Corporation 1220 West Railroad Street P.O. Box 16267 Duluth, MN 55816-0267 Contact: Tom Lochner (218)727-6891

1.2. Description of the facility

Georgia-Pacific Corporation (GP) owns and operates a hardboard manufacturing plant at 1220 West Railroad Street in Duluth, Minnesota. The plant is located on a 18.27 acre site in a developed portion of the City of Duluth. To the southeast, the site borders Slip C, in the Duluth Harbor. To the north and west, the site borders railroad yards and other industrial facilities. The plant employs approximately 210 people and operates 24 hours per day 365 days per year.

The facility currently operates two wet process hardboard lines designated as lines 3 and 5. A third (line 2) and fourth (line 4) wet process lines were taken out of production in 1997. Wood raw material for hardboard production comes from whole tree chips, board and lumber mill residue, and other available wood resources. After being trucked to the site, the wood is screened, conveyed to the mill, washed, steamed, and refined into wood fiber. The wood fiber then mixes with process chemicals, is formed into mats and is pressed into panels. The resulting panels are humidified, and may be trimmed, cut, sanded, perforated, laminated, or painted, depending on final product requirements. The finished products are packed for shipment by truck and rail.

Material stored in bulk at the site include wood chips, wood manufacturing residue, wood fiber slurry, process water, hardboard, propane, waxes, resins, paints, molasses, nitric acid, sodium hydroxide and aluminum sulfate. Fuel oils, hydraulic oils, used oils, and gasoline for manufacturing activities, plant vehicles, electricity generation, and boiler fuel, are also stored on-site in both indoor and outdoor tanks.

There are five boilers producing steam at the facility. Three are oil and natural gas boilers, one is a wood, oil or natural gas boiler, and one is a wood only boiler. The two wood-fired boilers and one of the oil/natural gas boilers are ducted to an Electrostatic Precipitator (ESP) for abatement of emissions. Currently two (of a previous five) standby diesel generators provide electricity as needed. Various bag filters and one cyclone collect wood material from raw materials handling, sanding, sawing, and other operations for use as fuel in the mills wood boilers.

In a permit issued on May 4, 2000, GP modified Boiler #5 by adding an air heater to the forced combustion air system. The air heater was expected to improve the combustion efficiency of the boiler allowing the boiler to fire more of the green wood waste generated from the manufacturing process. The Particulate Matter (PM) emissions were limited to 0.35 lb/mmBtu and the Particulate Matter less than 10 um in size (PM₁₀) emissions were limited to 0.2 lb/mmBtu to keep the modification a synthetic minor for Prevention of Significant Deterioration (PSD). GP also proposed to combust wood sugar molasses in the boiler. This fuel was added as an alternate fuel in the permit. The amount of molasses that could be burned was limited so that the Sulfur Dioxide (SO₂) emissions from the modification were below 40 tons per year, keeping the modification a synthetic minor for PSD.

1.3. Description of the Activities Allowed By This Permit Action

GP is requesting approval to burn more wood molasses at the facility. They want to add this additional capacity to Boiler #3. Both Boiler #3 and #5 (along with #4) vent to a common ESP and stack. In the time since the last permit the facility removed a significant percentage of a sulfur containing-chemical (aluminum sulfate) from the molasses stream. This is reflected in the most recent proximate analysis which shows a five-fold decrease in sulfur (~0.5%S to less than 0.1%S) in the molasses from the previous analyses (see attachment). Because of this the facility can now burn about five times as much molasses as before. The permit limit on molasses burning needs to be changed to allow this. This limit was a synthetic minor limit. The structure of the existing synthetic minor PM and PM₁₀ limits on boiler #5 are also being changed (see Part 3). The changing of these synthetic minor limits require a major amendment.

The tip of the fuel gun on boiler #3 is also being changed (holes are being machined into it) in an effort to optimize the burning of molasses.

Another change made to the permit was to change the modeling requirements to reflect the new state policy. Originally the facility had to model for SO₂, Nitrogen Oxides (NO_x), and PM₁₀. Now they have to only submit modeling information for those pollutants.

The permit also clarifies the current situation at SV025 that vents boilers #3-#5. The Minn. R. Ch. 7011 emission limits on each boiler are the same for all three so the limit for PM and opacity was moved to SV025 to make the permit clearer. This will be where the testing is done and compared to the limit. Individual limits at each EU level were removed so that there is no confusion in the future, i.e. the limit at the stack is 0.4 lb/MMBtu, not 3*0.4 or 1.2 lb/MMBtu. In addition it was specified that any stack test on SV025 that shows noncompliance with the standards at Minn. R. Ch. 7011 will be considered an indication of noncompliance for all three boilers. As the limit also still applies to each individual boiler, the Minnesota Pollution Control Agency (MPCA) could still require individual units to be tested if the test results show an exceedence of the limit at the stack. The technical feasibility of doing this has yet to be determined.

The facility recently conducted an evaluation of applicability of the NESHAP, Subpart JJ, for Wood Furniture Manufacturing Operations, and concluded that it applies to their solids coating applications equipment when it is used to manufacture furniture components. About five percent of the hardboard they manufacture is coated (painted) and sold to furniture manufactures. GP submitted a letter on March 12, 2001, which stated that their initial determination during the preparation of their Title V permit application was that the Duluth operations didn't fall under the Standard Industrial Classification (SIC) codes listed in the definition of wood furniture. It also stated that added confusion occurred because they believed the Maximum Achievable Control Technology (MACT) for Surface Coating Wood Panels and/or the MACT for Plywood and Composite Panels Manufacturing might apply. Further review by their corporate and Duluth staff led them to conclude that Subpart JJ does apply to their flow painting line, according to the letter. In large part, Subpart JJ contains requirements to insure that coatings applied have Hazardous Air Pollutant (HAP) content below 1.0 pound/pound of solids applied for existing sources, based on monthly average calculations and records. Appropriate references to the applicable parts of this regulation have been incorporated into the Title V permit for the facility by this amendment.

Recently the sister facility to this one, located in Superior, WI, closed. Some of the painted hardboard business produced there will be moved to the Duluth plant. As a result the paintline at Duluth will be modified. Since the Volatile Organic Compound (VOC)-containing materials are applied with a roller coater, the only pollutant emissions are VOC and HAP. Synthetic minor limits are proposed by GP to make this change, along with the previous one concerning molasses, a non-major modification under PSD. This change will be included in this permit action.

Another change made was to remove generators 3 through 5 from the permit since these have been removed from the site. Requirements specific to these emission units, such as fuel limits and monitoring, were also removed from the permit.

1.4. Facility Emissions:

Table 1. Emissions Associated With the Addition of Molasses as Fuel to Boiler #3*

Pollutant	Past Actual (tpy)	Future Potential (tpy)	Net Increase (tpy)
Particulate Matter (PM)	0	3.7	3.7
Particulate Matter < 10 microns (PM ₁₀)	0	3.3	3.3
Sulfur Dioxide (SO ₂)	0	19.9	19.9
Nitrogen Oxides (NO _x)	0	6.8	6.8
Carbon Monoxide (CO)	0	24.8	24.8
Volatile Organic Compounds (VOC)	0	3.2	3.2
Lead (Pb)	0	0.01	0.01

*Past actual emissions are assumed to be zero for the purposes of PSD since this boiler did not burn molasses within the last 2 years. Future potential emissions were calculated based on the emissions from burning molasses alone, and also reflecting the proposed permit limit on molasses usage at the facility.

Table 2. Emissions Associated With the Paintline Modification*

Pollutant	Past Actual (tpy)	Future Potential (tpy)	Net Increase (tpy)
Particulate Matter (PM)	0	0	0
Particulate Matter < 10 microns (PM ₁₀)	0	0	0
Sulfur Dioxide (SO ₂)	0	0	0
Nitrogen Oxides (NO _x)	0	0	0
Carbon Monoxide (CO)	0	0	0
Volatile Organic Compounds (VOC)	2.9	35.0	32.1

*Past actual emissions reflect the average, actual material usage at the facility for 1999 and 2000. Future potential emissions were calculated based on the proposed permit limit on VOC emissions at the facility based on a mass balance.

Table 3. Total Emissions Associated With the Permit Action*

Pollutant	Current Actual (tpy)	Future Potential (tpy)	Net Increase (tpy)	PSD Significant Emission Rate (tpy)	Significant Increase?
Particulate Matter (PM)	0	3.7	3.7	25	No
Particulate Matter < 10 microns (PM ₁₀)	0	3.3	3.3	15	No
Sulfur Dioxide (SO ₂)	0	19.9	19.9	40	No
Nitrogen Oxides (NO _x)	0	6.8	6.8	40	No
Carbon Monoxide (CO)	0	24.8	24.8	100	No
Volatile Organic Compounds (VOC)	2.9	38.2	38.2	40	No
Lead (Pb)	0	0.01	0.01	0.6	No

*This table is the sum of the previous two tables.

1.5. Facility Emissions:

Table 2. Total Facility Limited Potential to Emit Summary:

EU/G P No.	Emission Unit/Group Description	PM tpy	PM₁₀ tpy	SO₂ Tpy	NO_x Tpy	CO tpy	VOC Tpy	Pb Tpy	Total HAPs Tpy
GP001	Board Line Post-1969	55	55	---	---	---	206	---	134.4
GP002	Board Line Pre-1969	29	29	---	---	---	65	---	37.9
GP003	Diesel Generators	0.4	0.4	5	35	8	0.63	0.005	---
GP004	Wood Waste Handling	37	37	---	---	---	---	---	---
EU031	Boiler 1	27	24	400	69	6.7	0.53	2.5	0.66
EU032	Boiler 2	27	24	400	69	6.7	0.53	2.5	0.66
EU033	Boiler 3	34	28	400	69	6.7	0.01	1.2	0.66
EU034	Boiler 4	40	40	270	38	150	2.40	0.8	42.8
EU035	Boiler 5	30	15	38	13	110	1.80	0.01	32.92
EU041	Priming & Painting	---	---	---	---	---	35	---	16.2
	Misc. Sources	72	72	---					
FS 1-7	Fugitive Sources	107	45	---	---	---	87	---	7.6
	Total Facility Limited Potential Emissions*	387	297	1,514	293	288	399	7	274
	Total Facility Actual Emissions from 1998	148	78	123	76	120	110	NA	NA

Table 3. Permit Action Classification

Classification (put x in appropriate box)	Major/Affected Source	*Synthetic Minor	*Minor
PSD (list pollutant)		PM, PM ₁₀ , VOC, SO ₂	NO _x , CO
NAAR (list pollutant) Not Applicable			

* 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.

2. Regulatory and/or Statutory Basis

Regulatory Overview of Units Affected by the Modification

<i>EU, GRP, or SV #</i>	<i>Applicable Regulations</i>	<i>Comments</i>
EU 033 & 035 Boiler #3 & #5	40 CFR § 52.21	SO ₂ limits and limit on amount of wood molasses that can be burned established to keep the modification non-major for PSD.
EU 035 Boiler #5	40 CFR § 52.21	Streamlined SO ₂ , PM and PM ₁₀ synthetic minor limits from a previous modification.
EU 041 Paintline	40 CFR § 52.21	VOC synthetic minor limits established to keep the modification of the paintline non-major for PSD.

Regulatory Overview of Facility as Listed in Title V Permit

<i>EU, GP, or SV No.</i>	<i>Applicable Regulations</i>	<i>Comments:</i>
GP001, GP002, GP004, &EU041	Minn. R. 7011.0700	Industrial Process Equipment Rules for both pre-1969 sources and post-1969 sources.
GP003	Minn. R. 7011.2300	Standards of Performance for Stationary Internal Combustion Engines
EU031- EU035	Minn. R. 7011.0510	Standards of Performance for Existing Indirect Heating Equipment

3. Technical Information

There are three main issues plus a number of smaller ones (see Part 1.3 of this document for a complete list) dealt with in this permit. The three main issues are: 1) revising the amount of molasses permitted to be burned at the facility, 2) streamlining the previous SO₂, PM/PM₁₀ limits, and 3) modification of the paintline.

The amount of molasses that can be burned at the facility is currently limited so that the SO₂ emissions from a previous modification stays below 40 tons per year so that it qualifies as a synthetic minor for PSD. Since the sulfur has been reduced in the molasses, the calculated SO₂ emissions from burning this material have dropped considerably. Because of this, the facility can now burn considerably more molasses and still be below the 40 ton per year threshold for SO₂. This additional molasses capacity will be allocated to boiler #3 in addition to boiler #5.

In the previous permit, synthetic minor lb/MMBtu limits were included on boiler #5 for PM and PM₁₀. The PM and PM₁₀ limits were not tied solely to molasses burning, but apply to all fuels burned in boiler #5 due to the modification that had taken place on boiler #5. These limits are retained in this permit but are streamlined as described below.

Instead of having static emission limits, this permit will incorporate an equation for each pollutant: PM, PM₁₀, and SO₂. For PM and PM₁₀ the equations will couple the daily fuel usage in boiler #5, and the emission rate (lb/MMBtu) from the most recent performance test, together so that the facility can calculate the 365-day rolling sum of emissions every day. The equation for SO₂ is similar, but it: only applies to molasses burning, applies to both boiler #3 and #5, and will use a mass balance approach. Using these equations GP can then directly compare their actual emissions directly to the applicable PSD threshold. In this way, the previous modification will remain a synthetic minor modification. The equations add flexibility because GP can account for unforeseen increases in any of the emission rates, should they occur, by decreasing the amount of fuel burned so that the annual rolling average emission rate remains below the PSD limits. The emission limits in the permit correlate with the PSD significance levels for those pollutants, as calculated in the previous amendment, while also including a two ton per year cushion as a safety factor.

There are three boilers at GP (#3, #4, and #5) that vent to the same ESP and stack. Limits on these individual boilers are very difficult if not impossible to test for. To address this situation, no boiler specific limits on molasses usage will be included. Instead, boilers #3 and #5 will be limited on molasses burning together. The synthetic minor limit, 38 tons per year of SO₂ (40 ton – 2 ton safety factor), will include both boiler #5 and boiler #3. Compliance is based on tracking the sulfur content of the molasses and the amount combusted.

The worst case particulate emission factor used in the emission calculations for boiler #5 will be determined by a stack test while all three boilers are running on their worst case fuels for particulate emissions. These worst case fuels are: gas and maximum molasses in #3 (#3 can not burn oil and molasses at the same time), wood in #4, wood and maximum molasses in #5. The heat input from natural gas will be removed from the lb/MMBtu emission factor derived from the test since natural gas contributes negligible particulate emissions. When calculating the daily particulate emission rate from boiler #5 as required in the permit, GP will include the heat input (MMBTU) from all fuels burned in that boiler since it can not burn natural gas. It should be noted that, the heat input from natural gas will be included in the lb/MMBtu particulate emission rate derived from the test when determining compliance with the emission limits at Minn. R. Ch. 7011. When calculating daily sulfur dioxide emissions from boiler #3 and #5 as required in the permit, GP will only include heat input (MMBTU) from burning molasses.

GP will also be asked to conduct recurring proximate analyses on samples of molasses to confirm that the %S stays below the level used in this permit. If it rises over the level used in the calculations for this permit, GP will also have use this new number in its 365-day rolling calculations of SO₂ emissions to make sure the facility is meeting its 38 ton per year PSD threshold (40 ton – 2 ton safety factor).

The facility only produces about 10,000 tons of molasses per year, at 57 percent solids. Based on the proximate analysis information for molasses supplied by GP, this permit allows more than that amount.

The work on the tip of the fuel gun is not considered a “modification” to the boiler due to exemptions under 40 CFR pt. 60. As provided under 40 CFR 60.14(e)(4), the following shall not be considered a modification under Part 60: “Use of an alternative fuel...if, prior to the date any standard under this part becomes applicable to that source type,...the existing facility was designed to accommodate that alternative use.” GP burned molasses in Boiler #3 in the early 1980s. This was well before the effective date of the regulation of NSPS subp. Dc - June 9, 1989. In addition, the burner tip work is not necessary to allow the burning of the molasses, but is being done in an effort to optimize the burning conditions for molasses.

In addition, even if the exemption did not apply, it is unclear if this change would even meet the definition of modification. “Modification” is defined at 40 CFR § 60.14 as “any physical or operational change to an existing facility, which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies.” It is debatable if this new fuel would cause an increase in the emission rate of boiler #3 for any pollutant over and above the fuels it can already use (#6 and #2 fuel oil and natural gas) since the facility plans to not fire more than 1/3 the rated heat input of the boiler with molasses. Thus the molasses will be mixed with other fuels which the boiler can already burn. Determining the emissions change under this scenario is problematic, especially for pollutants such as NO_x, CO, and VOC that are correlated to the combustion conditions.

The modification at the paintline concerns the addition of one roll coater and two ovens to the end of the paintline. In addition, the paintline speed will be increased from 120 feet per minute to 150 feet per minute. An emission limit of 35 tons of VOC per year based on a 12-month rolling sum is proposed to keep the modification non-major under PSD. The compliance demonstration activities will be based on a mass balance. In addition the new equipment added to the paintline will subject the entire line to the MACT subp, JJ new source limit of 0.8 lb VHAP per lb of solids.

EU, GP, or SV #	Change:
EU 041	Added the requirements of 40 CFR 63, subp. JJ
SV 025	Testing requirements for PM and PM ₁₀ have been added. The measured PM and PM ₁₀ emission rates will be used to calculate the emissions for the permit.
	The S% in the permit application (0.1%S), which is based on the measured S% of the molasses with a margin of safety added, will be used to calculate the SO ₂ emission rates for the permit. A requirement was added to run a proximate analysis on a representative molasses sample once per year. The purpose of the test is to measure sulfur content of the molasses and compare the results to the emission factor of 0.29 lb S/MMBtu (0.59 lb SO ₂ /MMBtu) assumed in the permit application. This is a conservative estimate since it assumes 100% of the sulfur in the molasses is emitted. If the test results show that the S% is higher than the emission factor used in the permit application, then the Permittee shall use this new number in calculating SO ₂ emissions.

3.2 Administrative Changes

There are several changes that have been made to the permit as administrative types of changes. These are summarized below:

EU, GP, or SV #	Change:
SV 025	Testing and notifications were updated or removed if done. A new initial performance test is required since molasses will now be burned in Boiler #3. The Testing Frequency has changed from once every five years to once every two years since this information is used in the emission calculations and any changes in the performance of the ESPs become more critical now. Past stack testing has shown that changes in the performance of the ESP can occur over a 3 year period.
Several	Any submittals or actions that were to have been done after permit issuance and which have been completed were removed or indicated as having been submitted. NSPS notifications for Boiler #5 have all been received.

4. Conclusion

Based on the information provided by Georgia-Pacific, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 13700031-003, and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

5. Public/EPA Comment Period

No comments were received during the public comment period. U.S. Environmental Protection Agency (EPA) also did not provide any comments on the permit. No changes have been made to the permit since it was placed on public notice.

Staff Members on Permit Team: Trent Wickman, Bob Beresford, Stuart Arkley

Peer Review: Paula Connell

Attachment: Previous and New Proximate Analyses
Emission Calculations