DEPARTMENT OF
HEALTH AND ENVIRONMENTAL SCIENCES

AIR QUALITY BUREAU

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COGSWELL BUILDING

STATE OF MONTANA

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JG	INIT cc	1/8
WW		1-8
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TEAM LDR		ENF

NOTIFICATION OF PERMIT MODIFICATION

Date of Mailing: January 8, 1992

Name of Applicant: Louisiana-Pacific Corporation

Location: Missoula, Township 13 North, Range 19 West, Section 8, Missoula County, Montana.

Proposed Action: The department proposes to issue a permit modification, with conditions, to the above-named permittee. The permit will be assigned number 2303-M.

Proposed Conditions: See attached permit. More stringent emissions limitations may be necessary in the future if the present SIP fails to show attainment with federal and state air quality regulations.

Procedures for Appeal: The permit shall be deemed modified in accordance with this notice within 15 days of this notice, which is January 23, 1992, unless the permittee requests a hearing before the Montana Board of Health and Environmental Sciences. Any appeal must be filed within fifteen (15) days after the department notifies the permittee of its intention to modify the permit. The request for hearing shall contain an affidavit setting forth the grounds for the request. Any hearing will be held under the provisions of the Montana Administrative Procedures Act. Submit requests for hearing in triplicate to: Chairman, Board of Health and Environmental Sciences, Cogswell Building, Helena, Montana 59620. The filing of a request for hearing postpones the effective date of the modifications to the permit until the decision of the board becomes final or judicial review has been concluded.

Sincerely,

Jeffrey T. Chaffee, P.E.
Chief

AIR QUALITY PERMIT

Issued to: Louisiana-Pacific Corp.
Missoula Operations
P. O. Box 4007
Missoula, MT 59806

Permit # 2303-M
Notification of Permit Modification: 1-8-92
Date of Final Modification: 1-23-92

SECTION I: Permitted Facilities

An air quality permit is hereby granted to the above-named permittee, hereinafter referred to as Louisiana-Pacific, pursuant to Section 75-2-204, and 211, MCA, as amended, and Subchapter 11, PERMIT, CONSTRUCTION AND OPERATION OF AIR CONTAMINANT SOURCES, ARM 16.8.1101 through 16.8.1118 as amended, for the entire mill site located at P. O. Box 4007, Missoula, MT, including the following:

A. Six direct contact wood particle dryers with multiclone control. Each of the six dryers has a rated capacity of 20,000 lb/hr of wood. These dryers are heated with the exhaust gases from the sander dust boiler, the Roemmc sander dust burner, and the Coen sander dust burner. The sander dust boiler has a capacity of 55 million Btu/hr, the Roemmc sander dust burner capacity is 50 million Btu/hr, and the Coen sander dust burner capacity is 35 million Btu/hr. Each of the combustion units has an abort stack to divert the hot gases to the atmosphere in case of fire or other problems.

B. Two direct contact predryers with multiclone control. Each predryer has a rated capacity of 17,000 lb/hr of wood. These predryers are also heated with the exhaust from the Coen sander dust burner.

C. A Geka hot oil heater with a capacity of 20 million Btu/hour fired with natural gas. The hot oil is used in the continuous press line.

D. Wood waste cyclones and baghouses.

Source	Description	Control	Flow Rate
PC 301	Rej hopper	Bghs G&H	26680 CFM
PC 302	Blending area	"	
PC 401A	Form mach to face	"	26680 "
PC 401B	Form mach to core	"	
PC 404	Mat trim saw pneu	Cyclone	
PC 405	Line clean up pneu	Cyclone	
PC 501 A & B	5X25 Saws & hog	Bghs I	48000 CFM
PC 503 A & B	5X16 Saws & hog	"	
PC 502 A, B & C	Sander	Bghs M	48000 "
PC 504	Saws & hog to stor	Bghs A	8000 CFM
PC 602	Reman relay	"	
PC 507	Saws & hog edging	Bghs E&F	30000 "
			30000 "

Source	Description	Control	Flow Rate
PC 508	Saws & hog edging	Bghs B&C	26680 CFM
			26680 "
PC 509	New sander	Bghs K&L	47000 "
			47000 "
PC 510	Sanderdust relay	Bghs D	1000 "
PC 601	Reman pneu	Bghs J	16000 "
PC 805	Bullnose & saws	Bghs N	48000 "

E. Fugitive dust from receiving, storage and handling of raw material wood particles. This includes the receiving of shavings and sawdust by truck, unloading and conveying to the press line, the indoor storage area, or the outdoor storage pile via the radial stacker. It also includes fugitive emissions from the reclaiming of this material from the outdoor storage pile by front-end loader and conveying back to the press line.

F. This plant was existing in 1968 and operated with grandfather status until 1986 when a fifty percent expansion of the plant capacity was permitted (AQ Permit #2303 - dated September 15, 1986).

SECTION II: Limitations and Conditions

A. Plantwide Conditions:

1. All information contained in the 1986 permit application including, but not limited to, equipment lists, drawings, and specifications are considered conditions of the permit, except where more specific requirements are specified in this permit.

2. All stack and vent emissions are limited to 20% opacity. Compliance with this condition shall be determined by visual observation in accordance with 40 CFR Part 60, Appendix A, Method 9.

3. Louisiana-Pacific may be required to reduce emissions beyond the levels specified in this permit and accept more stringent limitations in a permit modification if, in the opinion of the department, future studies identify the particleboard plant as a significant contributor to ambient pollutant concentrations where these concentrations exceed or may exceed Montana or federal ambient air quality standards.

B. Wood Particle Dryers (1, 2, 3, 4, C, D, and predryers A and B)

1. Particulate emissions from each dryer and predryer shall not exceed 6.0 lb/hr of total particulate and 6.0 lb/hr of PM-10.

2. In order to demonstrate compliance with the emission limitations contained in paragraph B.1 above, Louisiana-Pacific shall perform annual source tests on one existing dryer (dryer 1, 2, 3, or 4) and one new dryer (dryer C or D) or one predryer (dryer A or B). The exact dryers to be tested shall be at the discretion of Louisiana-Pacific except that all dryers must be tested at least once during each five years of operation.

3. The source testing required in paragraph B.2 above shall consist of three complete test runs performed in accordance with department procedures and in accordance with 40 CFR Part 60, Appendix A (total particulates) and 40 CFR Part 51, Appendix M (PM-10). Louisiana-Pacific may utilize the total particulate test method (40 CFR Part 60, Appendix A) as a surrogate method for PM-10, but testing results in excess of 6.0 lb/hr shall constitute a violation of the total particulate and PM-10 limitations. Louisiana-Pacific shall also comply with the following source testing requirements:

   a. All dryers and predryers must be capable of accommodating the above-mentioned source testing.

   b. Louisiana-Pacific shall provide the department with at least a 15-day prior notice before the tests are performed.

   c. Reports of the source test results shall be submitted to the department within 60 days following each test.

4. Louisiana-Pacific shall install and operate temperature sensors at the inlet of each wood particle dryer and predryer. The temperature sensors shall have a remote readout and audible alarm. The alarm system shall be audible to the dryer or predryer operator and the operator(s) of all three combustion units. The alarm system shall become activated when exhaust gas exceeds 475 degrees F. Data from the temperature sensors shall be maintained for a period of at least 2 years and shall be available to the department upon request.

5. Emissions from each dryer or predryer shall not exceed 20% opacity as determined in accordance with 40 CFR Part 60, Appendix A, Method 9.

C. Baghouse Emission Limitations

1. All emission points equipped with baghouses are required to meet an emission limitation of 0.02 grains per dry standard cubic foot of exhaust gas for total particulate and 0.02 grains per dry standard cubic foot of exhaust gas for PM-10. Compliance with this emission limitation shall be by visual inspection unless such inspections indicate, in the opinion of the department, probable noncompliance with the 0.02

gr/dscf limitation, at which time source testing may be required.

2. All sander dust handling systems are to be enclosed and equipped with baghouse control. No outside storage of sander dust shall be allowed.

3. Contaminated floor sweepings commonly used for suspension burner fuel may be stored outside if the material is limited to no more than 50 cubic yards and the material is enclosed, covered, or surrounded by a windbreak in such a manner as to prevent blowing dust.

D. Cyclone Emission Limitations

All emission points equipped with cyclones are required to meet a 20% opacity limitation, 2.0 lbs/hr for total particulate, and 0.8 lbs/hr for PM-10. Compliance with this emission limitation shall be by visual inspection unless such inspections indicate, in the opinion of the department, probable noncompliance with this limitation at which time source testing may be required.

E. Particleboard Press Vent Limitations

1. The three batch press vent fans shall be limited to 5.75 lb/hr of total particulate and 5.75 lb/hr of PM-10.

2. The batch prepress vent fans shall be limited to 1.92 lb/hr of total particulate and 1.92 lb/hr of PM-10.

3. The continuous press vent fans shall be limited to 1.92 lb/hr of total particulate and 1.92 lb/hr of PM-10.

4. The continuous prepress vent fans shall be limited to 1.92 lb/hr of total particulate and 1.92 lb/hr of PM-10.

5. Compliance with this emission limitation shall be by visual inspection unless such inspections indicate, in the opinion of the department, probable noncompliance with this limitation at which time source testing may be required.

F. Fugitive Emission Controls

1. All fugitive emissions are limited to 20% opacity. Compliance with this condition shall be determined by visual observation in accordance with 40 CFR Part 60, Appendix A, Method 9.

2. Paving or dust suppressant shall be applied to all routinely used haul roads within the plant area. If dust suppressant is used it shall be reapplied at least once per year. Additional application of dust suppressant may be required if fugitive dust exceeds 20% opacity from the haul roads at

any time. Opacity shall be determined by EPA Method 9, CFR Part 60, Appendix A.

3. Dust suppressant measures shall be applied to the shavings and sawdust storage pile sufficient to control airborne wood dust. The opacity of these emissions shall not exceed 20% opacity as determined by EPA Method 9, 40 CFR Part 60, Appendix A.

4. Fugitive particulate emissions from the raw material storage pile including unloading, conveying to the pile, and transfer back to the mill shall not exceed 320 lbs/day for total particulate emissions, or 115 lbs/day PM-10. Compliance with these limitations shall be determined as follows:

Emissions (TSP or PM-10) = E(OU) + E(TP) + E(RP)

Where:
OU = Outside raw material unloading (tons)
TP = Raw material transfer to outside storage (tons)
RP = Raw material reclaim from outside storage (tons)
E(OU) = (OU)(1 - control eff)(Emiss Fact)(.33)
E(TP) = (TP)(1 - cont eff)(Emiss Fact)(.33)
E(RP) = (RP)(1 - cont eff)(Emiss Fact)(.33)
Emission Factor = 1.0 lb/tn for total particulate
and 0.36 lb/tn for PM-10

Notes: 1) The control efficiencies as of 12/10/91 are considered to be zero.

2) The 0.33 is utilized to distribute the emission factor to each emission point within the process since the 320 lb/day and the 115 lb/day limits are based on 50% of the raw material passing through the outside unloading and the outside storage pile.

3) Louisiana-Pacific shall keep records of raw material receipts at the outside unloading station, the amount transferred to outside storage, and the amount reclaimed from outside storage on a daily basis. These records shall be made available to the department for inspection when requested.

G. Emission Monitoring Requirements:

1. An electric eye monitor, similar to those used in incinerators, shall be installed in the abort stack to the sander dust boiler. The monitor shall have a remote readout visible or audible to the operator of the boiler. Louisiana-Pacific shall immediately initiate corrective action whenever emissions in excess of 20% are observed.

Data from the monitor need not be recorded and digitized unless the department has reason to believe violation of the opacity standard exists.

2. The department reserves the right to require opacity monitors at the Coen burner abort stack, sander dust boiler abort stack, hot oil heater stack, and the Roemmc sander dust burner abort stack. The decision to require this monitoring shall be based upon whether or not the department has reason to believe a violation of the opacity standard may exist. If excess emissions exist or may exist at these locations, further opacity monitoring may be required.

H. General Conditions

1. Inspection - The recipient shall allow the department's representatives access to the source at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS) or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.

2. Waiver - The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if the recipient fails to appeal as indicated below.

3. Compliance with Statutes and Regulations - Specific listing of requirements, limitations, and conditions contained herein does not relieve the applicant from compliance with all applicable statutes and administrative regulations including amendments thereto, nor waive the right of the department to require compliance with all applicable statutes and administrative regulations, including amendments thereto.

4. Enforcement - Violations of limitations, conditions and requirements contained herein may constitute grounds for permit revocation, penalties or other enforcement as specified in Section 75-2-401 et seq., MCA.

5. Appeals - Any person or persons who are jointly or severally adversely affected by the department's decision may request, within fifteen (15) days after the department renders its decision, upon affidavit, setting forth the grounds therefor, a hearing before the Board. A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The department's decision on the application is not final unless fifteen (15) days have elapsed and there is no request for a hearing under this section. The filing of a request for a hearing postpones the effective date of the department's decision until the conclusion of the hearing and issuance of a final decision by the Board.

6. Application Data - Information submitted on behalf of an air quality permit application is hereby incorporated as a condition of that permit including commencement and completion dates of construction.

7. Permit Inspection - As required by ARM 16.8.1115 Inspection of Permit, a copy of the air quality permit shall be made available for inspection by air quality personnel at the location of the permitted source.

8. Construction Commencement - Construction must begin within one year of permit issuance or the permit will be considered withdrawn.

9. Permit Fees - Pursuant to Section 75-2-211, MCA, as amended by the 1991 Legislature, the continuing validity of this permit is conditional upon the payment by the permittee of an annual operation fee, as required by that Section and rules adopted thereunder by the Board of Health and Environmental Sciences.

Permit Analysis

Louisiana-Pacific - Missoula

Permit Modification - Missoula Plant

A. Introduction

This particleboard plant was existing in the Missoula area prior to 1968. The original mill had a capacity of one hundred million square feet of 3/4-inch particleboard. Louisiana-Pacific expanded the mill capacity in 1987 by fifty percent by using the offsets provided by the closure of the Evans Products plant. The expanded mill has a capacity of one hundred and fifty million square feet of 3/4-inch particleboard. The existing mill consisted of four rotary dryers heated by the exhaust gases from the sander dust boiler and a sander dust burner. The old press line utilized a batch press with a capacity of 100 million square feet 3/8-inch basis. The 1987 expansion added two new wood particle dryers, two new predryers with a Coen sander dust burner, and a new press line with a continuous press. A Konus natural gas heater was also added to heat the new press line.

On July 1, 1987 the Environmental Protection Agency (EPA) promulgated new ambient air quality standards for particulate matter with an aerodynamic diameter of 10 microns or less (PM-10). The annual standard is 50 micrograms per cubic meter and the 24-hour standard is 150 micrograms per cubic meter. These standards were in turn adopted by the Montana Board of Health and Environmental Sciences on April 15, 1988. Due to violations of these standards, Missoula has been designated as a PM-10 nonattainment area. As a result of this designation the Montana Department of Health and Environmental Sciences and the Missoula County Air Pollution Control Agency are required to develop a plan to control these emissions and bring the area into compliance with the federal and state ambient air quality standards.

In order to identify the emission sources which were contributing to the violation of the PM-10 standard, Missoula County conducted a chemical mass balance study (CMB) of the area. The Louisiana-Pacific mill was not identified as a significant contributor to the problem by this method, but fugitive dust has been a problem at the plant and is being addressed at all other point sources in nonattainment areas. Therefore, this permit modification is adding general fugitive dust control measures to this facility.

B. Process Description

This plant processes raw wood fiber into particleboard by refining the fiber, adding resin and pressing the mat into boards. The raw material, primarily wood shavings from the planing process in sawmills, is transported to Missoula by truck. This material is unloaded at the plant and moved by conveyor to the dryers and the press line, or out to the storage pile. The material is reclaimed from the pile by front-end loader and conveyed to the dryers and the press line. Approximately 50% of the plant production is stored in this pile during the year. The wood fiber is then dried, blended

with resin, and introduced to the press line for particleboard production. Many baghouses and cyclones are used in the wood fiber handling systems. Sawdust and sander dust is used as fuel for the boiler and sander dust burners. This plant also contains a remanufacturing section which processes the particleboard into finished wood which is used in furniture production.

Since the SIP process did not identify this source as a significant contributor to the Missoula nonattainment problem, no emission limitations were changed in this permit. Only cyclone-controlled and fugitive dust sources were addressed in more detail.

C. Applicable Regulations

1. ARM 16.8.821 Ambient Standard for PM-10. Louisiana-Pacific must demonstrate compliance with the applicable ambient air quality standards. The SIP demonstration of attainment indicates that the emission limitations contained in this permit, along with control measures applied to other sources, will bring the Missoula area into compliance with the PM-10 standards.

2. ARM 16.8.1113(a) Modification of Permit. The department is allowed to modify Louisiana-Pacific Corporation's permit due to a change in an applicable standard (PM-10) adopted by the Board of Health and Environmental Sciences. Louisiana-Pacific may appeal the department's modification to the Board.

3. ARM 16.8.1115 Inspection of Permit. Louisiana-Pacific must maintain a copy of their air quality permit at the mill site and make that copy available for inspection by department personnel upon request.

4. ARM 16.8.1117 Compliance with Other Statutes and Rules. Louisiana-Pacific must comply with all other applicable state, federal, and local laws and regulations.

5. ARM 16.8.1401 Particulate Matter, Airborne. This section requires reasonable precautions for fugitive emissions sources and Reasonably Available Control Technology (RACT) for existing fugitive sources located in a nonattainment area. The department, in consultation with EPA, has determined that the use of chemical stabilization or paving on major haul roads will satisfy these requirements.

6. ARM 16.8.1402 Particulate Matter, Fuel Burning Equipment. More stringent limits contained in this permit supersede this rule.

7. ARM 16.8.1403 Particulate Matter, Industrial Process. The requirements of this rule are superseded by the stricter emission limits established in the permit.

8. ARM 16.8.1404 Visible Air Contaminants. The requirements of this permit either supersede this rule because they are more stringent or they are equivalent.

9. Louisiana-Pacific Missoula RACT Analysis

The Louisiana-Pacific plant in Missoula has six wood particle dryers and two predryers which are heated with direct contact combustion gas from a sander dust boiler, a Roemmc sander dust burner, and a Coen sander dust burner. All dryers are connected by a manifold system and are controlled by high efficiency multiclones. All combustion emissions as well as dryer emissions exit to atmosphere through the multiclones. Therefore, the primary emissions points at this facility are:

a. Eight wood particle dryers;
b. Cyclones and baghouses from wood handling systems;
c. Fugitive emissions from raw material handling and storage;
d. Particleboard prepresses and final presses.

Mr. Martin Hills, project engineer for Louisiana-Pacific, submitted the RACT justification. He listed both the electrified filter bed and the E-tube as systems which may increase the degree of control on their dryer emissions. He stated that the amount of increased control must be significant to justify the investment in the control system. Martin then referenced the recent source tests to show that the actual emissions are very close to the emissions rates reported for the EFB and the E-tube systems. He concluded that there is no significant increase in control with the new systems.

The BACT-LAER clearinghouse for wood dryers has been reviewed. The following list shows the BACT determinations made from 1985 through 1990.

Louisiana-Pacific, CA Wood Fiber Dryer (600,000 lb/hr)	.032 gr/scf 25.3 lb/hr	High Eff Cyc Control
Potlatch, MN Wood Gasifier Dryer (36,000 lb/hr)	.015 gr/acf 19.3 lb/hr	EFB
Louisiana-Pacific, VA Wafer Dryer	9 lb/hr	EFB
Weyerhauser, MI Wood Dryer (22,000 lb/hr)	19 lb/hr	Cyclone
Louisiana-Pacific Wood Particle Dryer (20,000 lb/hr) Missoula, MT	.035 gr/dscf 6 lb/hr/unit	Multiclone Control

From the above information and that submitted by Louisiana-Pacific, the department has determined that the Missoula dryers meet RACT requirements for wood particle dryers.

All wood handling systems are controlled by baghouses or cyclones which are considered to be RACT. The fugitive emissions from raw material handling and storage have been the source of public complaints during periods of high winds. The state currently has an enforcement action addressing this problem. Louisiana-Pacific has made some recent changes in operation to control this source better. These emissions are generally large particles typical of fugitive sources.

D. Department Review of Modification

1. Existing Air Quality

The Missoula area is currently a nonattainment area for PM-10 standards. The department has determined, based on its preliminary demonstration of attainment, that the emission limitations contained in this permit, along with control measures applied to other sources, will bring Missoula into compliance with the PM-10 standards.

2. Emission Inventory - Particulate TSP (Allowable)

Summary of Allowable Emissions	Existing	Proposed
PC 206 Dryer #1-multiclone	25.2 TPY	26.3 TPY
PC 207 Dryer #2 "	25.2	26.3
PC 208 Dryer #3 "	25.2	26.3
PC 209 Dryer #4 "	25.2	26.3
PC 210 Predryer A-multiclone	25.2	26.3
PC 211 Predryer B "	25.2	26.3
PC 212 Dryer #C "	25.2	26.3
PC 213 Dryer #D "	25.2	26.3
PC 301 Rej hopper - baghouse	*	+
PC 302 Blending area, shavings to storage, cycl (10% use)	0.8	+
PC 401A Form mach to face bghs	*	20.0
PC 401B Form mach to core bghs	*	20.0
PC 404 Mat trim saw cyclone	8.0	8.0
PC 405 Line cleanup cyclone	2.1	2.1
PC 501A&B 5X25 Saw & blow hog bghs	*	+
PC 502A Sander baghouse	*	36.0
PC 502B Sander baghouse	*	+
PC 502C Sndr dust to dust bin, bghs	*	+
PC 503 A&B 5X16 saws & blowhog bghs	*	36.0
PC 504 Saws & hog to storg bghs	*	+
PC 507 Saws & hogged edge-new bghs	*	45.2
PC 508 Saw & hog relay-new bghs	*	40.0
PC 509 Sander bghs-new	*	70.4
PC 510 Sanderdst relay-baghouse	*	0.8

Summary of Allowable Emissions		Existing	Proposed
PC 601	Reman pneu. baghouse	*	12.0
PC 602	Reman relay baghouse	*	6.0
PC 805	Bullnose & trim saws	*	36.0
PC 701	3 hot press vent fans	25.2	26.3
PC 702	Pre press vent fans	8.4	8.8
PC 703	Hot press vents - new	8.4	8.8
PC 704	Pre press vent fans-new	8.4	8.8
PC ---	Fugitive emissions from storage & handling of raw material	58.5	58.5
Total TSP Emissions		321.4	595.6

*Negligible emissions.
+Included with another emission point (see Sec.I.D)
Note: See expansion permit analysis for calculation of existing emission estimates. The proposed emission estimate includes dryer emissions at 6 lb/hr for 8760 hr/yr. Baghouse emissions were calculated at 0.02 gr/dscf and 8760 hrs/yr. The press vent emissions use 2.0 lb/hr and 8760 hr/yr. The fugitive emission estimate has been changed to include the raw material storage pile, unloading, storage, and reclaiming. The following estimates are from Mr. Charles Likes, mill manager:

Raw material required to operate the plant for one year - 195,000 bone dry units. Mr. Likes estimates 50% of this wood is unloaded, stored, and reclaimed from the pile at some time during the year, and he uses 2400 lbs/BDU.

(195,000 BDU/Yr)(50%)(2400 lb/BDU)(1 tn/2000 lb) = 117,000 tn/yr wood through the pile

E. F. = 1.0 lb/tn for unloading, loading and storage of sawdust (AP-42, 10.3-1 sawdust handling)

Calculate emissions:
(117,000 tn wood/yr)(1.0 lb/tn)(1/2000) = 58.5 tn/yr fugitive emissions

The September 15, 1986 permit allowed 27.8 tn/yr for fugitives; however, this estimate did not include raw material storage. The new fugitive estimate is 30.7 tns/yr larger than the estimate made in 1986. This has been added to the fugitive emission estimate for this permit and incorporated into the allowable emission limits of 320 lb/day for total particulate and 115 lb/day for PM-10.

4. Emission Inventory - Gaseous Pollutants (Potential)

The gaseous pollutants are generated by the combustion units which exhaust through the six dryers or two predryers, except for the hot oil heater which has a separate stack.

Emissions in Tons/Yr

Source	SOx	NOx	VOC	CO
Sander dust boiler	2.1	9.6	19.8	56.7
Roemmc dust burner	1.9	8.8	18.0	51.5
Coen dust burner	1.3	6.1	12.6	36.1
Geka hot oil htr	0.0	11.2	0.2	2.8
Totals	5.3	35.7	51.4	147.1

Note: Additional VOC emissions originate from the finished board print line (Reman section), but have not been quantified in this table.

Calculations:

Sander Dust Boiler - 55 million Btu/hr capacity

1. Assume sander dust has 8500 Btu/lb.
2. Then (55 mmBtu/hr)(1 lb sander dust/8500 Btu) = 6470 lb/hr or 28,334 tn/yr fuel (8760 hr/yr)
3. Emission factor = (1-02-009-04) EPA 450/4-90-003 (AIRS Doc)
   SOx - 0.15 lb/tn burned
   (28,334 tn/yr)(0.15 lb/tn)(1/2000) = 2.1 TPY
   NOx - 0.68 lb/tn burned
   (28,334 tn/yr)(0.68 lb/tn)(1/2000) = 9.6 TPY
   VOC - 1.4 lb/tn burned
   (28,334 tn/yr)(1.4 lb/tn)(1/2000) = 19.8 TPY
   CO - 4.0 lb/tn burned
   (28,334 tn/yr)(4.0 lb/tn)(1/2000) = 56.7 TPY

Roemmc Sander Dust Burner - 50 million Btu/hr capacity

1. Assume sander dust has 8500 Btu/lb.
2. Then (50 mmBtu/hr)(1 lb sander dust/8500 Btu) = 5882 lb/hr or 25,763 tn/yr fuel (8760 hr/yr)
3. Emission factor = (1-02-009-04) wood-fired boiler
   SOx - 0.15 lb/tn burned
   (25,763 tn/yr)(0.15 lb/tn)(1/2000) = 1.9 TPY
   NOx - 0.68 lb/tn burned
   (25,763 tn/yr)(0.68 lb/tn)(1/2000) = 8.8 TPY
   VOC - 1.4 lb/tn burned
   (25,763 tn/yr)(1.4 lb/tn)(1/2000) = 18.0 TPY
   CO - 4.0 lb/tn burned
   (25,763 tn/yr)(4.0 lb/tn)(1/2000) = 51.5 TPY

Coen Sander Dust Burner - 35 million Btu/hr capacity

1. Assume sander dust has 8500 Btu/lb.
2. Then (35 mmBtu/hr)(1 lb sander dust/8500 Btu) = 4117 lb/hr or 18,032 tn/yr fuel (8760 hr/yr)
3. Emission factor = (1-02-090-04) wood-fired boiler

SOx - 0.15 lb/tn burned
(18,032 tn/yr)(0.15 lb/tn)(1/2000) = 1.3 TPY
NOx - 0.68 lb/tn burned
(18,032 tn/yr)(0.68 lb/tn)(1/2000) = 6.1 TPY
VOC - 1.4 lb/tn burned
(18,032 tn/yr)(1.4 lb/tn)(1/2000) = 12.6 TPY
CO - 4.0 lb/tn burned
(18,032 tn/yr)(4.0 lb/tn)(1/2000) = 36.1 TPY

Geka Hot Oil Heater - 20 million Btu/hr capacity

1. Natural gas-fired - 1100 Btu/CF
2. Then (20 mmBtu/hr)(1 CF/1100 Btu) = 18182 CF/hr
   or 159.3 million CF/yr (8760 hr/yr)
3. Emission Factor - (1-02-006-02)
   SOx - 0.6 lb/MMCF burned
   (159.3 MMCF/yr)(0.6 lb/MMCF)(1/2000) = 0.0 TPY
   NOx - 140.0 lb/MMCF burned
   (159.3 MMCF/yr)(140 lb/MMCF)(1/2000) = 11.2 TPY
   VOC - 2.8 lb/MMCF burned
   (159.3 MMCF/yr)(2.8 lb/MMCF)(1/2000) = 0.2 TPY
   CO - 4.0 lb/MMCF burned
   (159.3 MMCF/yr)(4.0 lb/MMCF)(1/2000) = 2.8 TPY

DEPARTMENT OF HEALTH AND ENVIRONMENTAL SCIENCES
Air Quality Bureau
Cogswell Building, Helena, Montana 59620
(406) 444-3454

ENVIRONMENTAL ASSESSMENT (EA)

Project or Application: Modification of the Louisiana-Pacific Corporation air quality permit #2303 for the Missoula particleboard plant.

Description of Project: This permit modification will establish definitive emission limits for all emission points within the plant and require fugitive dust control on those haul roads within the plant area.

Benefits and Purpose of Proposal: Louisiana-Pacific (LP) is currently not a significant contributor to the Missoula PM-10 nonattainment problem. This permit modification will establish definitive enforceable emission limits for all sources at the LP facility and, therefore, ensure that their contribution to Missoula's PM-10 problem will not increase beyond known limits.

Description and analysis of reasonable alternatives whenever alternatives are reasonably available and prudent to consider: One alternative would be to require greater degrees of control from other sources in the nonattainment area. The SIP control plan worked out by Missoula County has attempted to distribute the control burden fairly across the area. The controls required of Louisiana-Pacific are minimal fugitive dust controls which have been required to match the city, county, and state efforts to control road and street dust emissions.

A listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by the agency or another government agency: A complete listing of enforceable permit conditions and a permit analysis is contained in permit 2303-M. Further information is contained in the Missoula SIP.

Recommendation: No EIS required.

If an EIS is needed, and if appropriate, explain the reasons for preparing the EA: N/A

If an EIS is not required, explain why the EA is an appropriate level of analysis: This modification will reduce fugitive emissions from the LP plant in Missoula, and assist in attaining compliance with the PM-10 regulations for the area. This is a small change to the existing permit, and the EA is sufficient environmental review.

Other groups or agencies contacted or which may have overlapping jurisdiction: None.
Individuals or groups contributing to this EA: AQB staff
EA prepared by: Warren Norton
Date: December 3, 1991.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

		MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ATTACHED
1. TERRESTRIAL AND AQUATIC LIFE AND HABITATS	1.			X			
2. WATER QUALITY, QUANTITY AND DISTRIBUTION	2.			X			
3. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE	3.			X			
4. VEGETATION COVER, QUANTITY AND QUALITY	4.			X			
5. AESTHETICS	5.			X			
6. AIR QUALITY	6.			X			
7. UNIQUE ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCE	7.			X			
8. DEMANDS ON ENVIRONMENTAL RESOURCE OF WATER, AIR AND ENERGY	8.			X			
9. HISTORICAL AND ARCHAEOLOGICAL SITES	9.					X	
10. CUMULATIVE AND SECONDARY IMPACTS	10.			X			

POTENTIAL IMPACTS ON HUMAN ENVIRONMENT

		MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ATTACHED
1. SOCIAL STRUCTURES AND MORES	1.			X			
2. CULTURAL UNIQUENESS AND DIVERSITY	2.			X			
3. LOCAL AND STATE TAX BASE AND TAX REVENUE	3.			X			
4. AGRICULTURAL OR INDUSTRIAL PRODUCTION	4.			X			
5. HUMAN HEALTH	5.			X			X
6. ACCESS TO AND QUALITY OR RECREATIONAL & WILDERNESS ACTIVITIES	6.			X			
7. QUANTITY AND DISTRIBUTION OF EMPLOYMENT	7.			X			
8. DISTRIBUTION OF POPULATION	8.			X			
9. DEMANDS FOR GOVERNMENTAL SERVICES	9.			X			
10. INDUSTRIAL AND COMMERCIAL ACTIVITY	10.			X			
11. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS	11.			X			
12. CUMULATIVE AND SECONDARY IMPACTS	12.			X			

.otential Impacts on Human Health

5. Human Health - The permit modification is part of the control strategy to bring the Missoula area into compliance with the ambient PM-10 standards. Compliance with this standard should have a positive effect on the health of the citizens of the Missoula valley.