

ASSIGNMENT

to

GENERAL AIR CONTAMINANT DISCHARGE PERMIT

Lane Regional Air Protection Agency
 1010 Main Street
 Springfield, OR 97477
 (541) 736-1056

PERMITTEE:

Zip-O-Log Mills, Inc.
dba: Zip-O-Lumber Co.
 P.O. Box 2130
 Eugene, Oregon 97402

INFORMATION RELIED UPON:

Application No.: 48892
 Date Received: September 2, 2004

PLANT SITE LOCATION:

2235 West 6th Avenue
 Eugene, Oregon 97402

LAND USE COMPATABILITY

STATEMENT: October 25, 1999

Approving Authority: City of Eugene

ASSIGNMENT: The permittee identified above is assigned by the Lane Regional Air Protection Agency to the General ACDP listed below in accordance with ORS 468A.040, LRAPA Title 37 Section 37-0060(2) and based on the land use compatibility findings included in the permit record (note: land use compatibility statements are not applicable to portable sources).



 Merlyn L. Hough, Director

MAY 28 2009

 Dated

General Air Contaminant Discharge Permit Issued in Accordance with Section 37-0060:

General ACDP Number	Expiration Date	Source Category Description	SIC
AQGP-010	10/14/2018	Sawmills and/or Planing Mills, 25,000 or more bd.ft./maximum 8 hr. finished product (Title 37, Table 1, Part B, 62)	2421

SUPPLEMENTAL INFORMATION:

Facility contact:		
Name:	James Hallstrom, President	
Phone number:	541-343-7158	
Facsimile number:	unknown	
e-mail address:	unknown	
Permit Summary:		
Source Test Requirement	No	N/A
NSPS (40 CFR Part 60)	No	N/A
NESHAP (40 CFR Part 63)	No	N/A
Reports Required:		
Annual	Yes	February 15th
NSPS	N/A	N/A
NESHAP	N/A	N/A
Other	N/A	N/A
Public Notice	Category I	
Application review report:		
LRAPA has reviewed the application for assignment to the General ACDP and determined that the application is complete and the subject facility qualifies for assignment to the General ACDP.		

GENERAL AIR CONTAMINANT DISCHARGE PERMIT

Lane Regional Air Protection Agency
1010 Main Street
Springfield, OR 97477
Telephone: (541) 736-1056

This permit is issued in accordance with the provisions of ORS 468A.040 and incorporated into Title 37 Section 37-0060 by LRAPA for the following source category:

Sawmill, planing mill, or millwork (including kitchen cabinets and structural members), 25,000 or more bd.ft./shift finished product and plywood manufacturing and/or veneer drying. SIC 2421, 2426, 2431, 2434, 2435, 2436, 2439, or 4961

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1.0 PERMIT ASSIGNMENT

- 1.1 Qualifications** All of the following conditions must be met in order to qualify for assignment to this General Air Contaminant Discharge Permit (ACDP):
- a. The permittee is performing activities listed on the cover page, including sawing, planing, sanding, chipping, kiln drying, plywood pressing and surface coating along with supporting activities such as material conveyors (mechanical and pneumatic), veneer dryers, and boilers.
 - b. A Simple or Standard ACDP is not required for the source.
 - c. The source is not having ongoing, recurring or serious compliance problems.
- 1.2 Assignment** LRAPA will assign qualifying permittees to this permit that have and maintain a good record of compliance with the LRAPA's Air Quality regulations and that LRAPA determines would be appropriately regulated by a General ACDP. LRAPA may rescind assignment if the permittee no longer meets the requirements of LRAPA Title 37, Section 37-0060 and the conditions of this permit.
- 1.3 Permitted Activities** The permittee is allowed to discharge air contaminants from processes and activities related to the air contaminant source(s) listed on the first page of this permit until this permit expires, is modified, revoked or rescinded as long as conditions of this permit are complied with. If there are other emissions activities occurring at the site besides those listed on the cover page of this permit, the permittee may be required to obtain a Standard Permit or additional General Permits, if applicable.

2.0 EMISSION STANDARDS AND LIMITS

- 2.1 Visible Emissions** The permittee must comply with the following visible emission limits, as applicable:
- a. Emissions from any air contaminant source installed on or before June 1, 1970 and not located in a special control area must not equal or exceed 40% opacity for a period aggregating more than 3 minutes in any one hour.

- b. Emissions from any air contaminant source installed, constructed, or modified after June 1, 1970 or located in a special control area must not equal or exceed 20% opacity for a period aggregating more than 3 minutes in any one hour.
- c. Visible emissions from veneer dryers must not exceed:
 - i. An average operating opacity of 10 percent; and
 - ii. A maximum opacity of 20 percent.

2.2 Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits, as applicable:

- a. Particulate matter emissions from any fuel burning equipment installed on or before June 1, 1970 must not exceed 0.2 grains per dry standard cubic foot, corrected to 12% CO₂ or 50% excess air.
- b. Particulate matter emissions from any fuel burning equipment installed, constructed, or modified after June 1, 1970 must not exceed 0.1 grains per dry standard cubic foot, corrected to 12% CO₂ or 50% excess air.
- c. Particulate matter emissions from any air contaminant source, other than fuel burning equipment and fugitive emission sources, installed on or before June 1, 1970, must not exceed 0.2 grains per dry standard cubic foot.
- d. Particulate matter emissions from any air contaminant source, other than fuel burning equipment and fugitive emission sources, installed after June 1, 1970, must not exceed 0.1 grains per dry standard cubic foot.
- e. Total particulate matter emissions from all veneer and plywood mill sources within the plant site, including, but not limited to, sanding machines, saws, presses, barkers, hogs, chippers, and other material size reduction equipment, process and space ventilation systems, and truck loading and unloading facilities, excluding veneer dryers, fuel burning equipment and refuse burning equipment, must not exceed 1 pound per 1,000 square feet of plywood or veneer production on a 3/8" basis of finished product equivalent.
- f. Particulate emissions from veneer dryers must not exceed:
 - i. 0.75 lb/1000 square feet (MSF) on a 3/8" basis for direct wood-fired dryers when using fuel with less

than or equal to 20% moisture;

- ii. 1.50 lb/MSF on a 3/8" basis for direct wood-fired dryers when using fuel with greater than 20% moisture;
- iii. In addition to i and ii, 0.40 lb/1000 pounds of steam generated in boilers that exhaust combustion gases to the veneer dryer;
- iv. Exhaust gases from fuel-burning equipment vented to the veneer dryer are exempt from Conditions 2.2.a. and 2.2.b.

2.3 Fugitive Emissions The permittee must take reasonable precautions for preventing fugitive dust emissions from becoming a nuisance, such as but not limited to:

- a. Treating vehicular traffic areas of the plant site under the control of the permittee.
- b. Operating all air contaminant-generating processes so that fugitive type dust associated with the operation will be adequately controlled at all times.
- c. Storing collected materials from air pollution control equipment in a covered container or other method equally effective in preventing the material from becoming airborne during storage and transfer.

2.4 Particulate Matter Fallout The permittee must not cause or permit the emission of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. LRAPA will verify that the deposition exists and will notify the permittee that the deposition must be controlled.

2.5 Nuisance and Odors The permittee must not cause or allow air contaminants from any source to cause a nuisance. Nuisance conditions will be verified by LRAPA personnel.

2.6 Fuels and Fuel Sulfur Content The permittee must not use any fuel other than wood, natural gas, propane, butane, ASTM grade fuel oils, or on-specification used oil.

- a. Fuel oils must not contain more than:
 - i. 0.3% sulfur by weight for ASTM Grade 1 distillate oil;
 - ii. 0.5% sulfur by weight for ASTM Grade 2 distillate oil;

iii. 1.75% sulfur by weight for residual oil (ASTM Grades 3 through 6);

b. The permittee is allowed to use on-specification used oil that contains no more than 0.5% sulfur by weight. The permittee must obtain analyses from the marketer or, if generated on site, have the used oil analyzed, so that it can be demonstrated that the used oil does not exceed the used oil specifications contained in 40 CFR Part 279.11, Table 1.

2.7 Veneer Dryers

a. No person shall willfully cause or permit the installation or use of any means, such as dilution, which, without resulting in a reduction in the total amount of air contaminants emitted, conceals an emission which would otherwise violate this rule;

b. Where effective measures are not taken to minimize fugitive emissions, LRAPA may require that the equipment or structures in which processing handling, and storage are done, be tightly closed, modified, or operated in such a way that air contaminants are minimized, controlled, or removed before discharge to the open air;

c. LRAPA may require more restrictive emission limits than provided in Conditions 2.1c and 2.2f for an individual plant upon a finding by LRAPA that the individual plant is located or is proposed to be located in a special problem area. The more restrictive emission limits for special problem areas may be established on the basis of allowable emissions expressed in opacity, pounds per hour, or total maximum daily emissions to the atmosphere, or a combination thereof.

3.0 NEW SOURCE PERFORMANCE STANDARDS

3.1 Applicability

Federal requirements apply to boilers for which construction, modification, or reconstruction is commenced after June 9, 1989 and that have a maximum design heat input capacity of 100 million Btu per hour (Btu/hr) or less, but greater than or equal to 10 million Btu/hr. These requirements are in addition to requirements listed elsewhere in the permit. The full text of the federal standards are found in 40 CFR 60, Subpart Dc.

3.2 Definitions

a. **Construction** means fabrication, erection, or installation of an affected facility.

- b. **Modification** means any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted.
- 3.3 Visible emissions limit** If oil is burned in the boiler and the heat input is greater than 30 million Btu/hr, visible emissions must not exceed 20% opacity as a 6-minute average, except for one 6-minute period per hour of not more than 27% opacity.
- 3.4 Visible emissions monitoring** If residual oil is burned in the boiler and the heat input is greater than 30 million Btu/hr, visible emissions must be monitored with a continuous opacity monitoring system (COMS) installed, operated, and maintained in accordance with 40 CFR §60.13.
- 3.5 Sulfur Limits** The sulfur content of fuel oil burned in the boiler must not exceed 0.5% by weight.
- 3.6 Fuel sulfur monitoring** Unless an approved alternate monitoring frequency is obtained from the EPA Administrator, the permittee must record and maintain records of the amounts of each fuel combusted during each day in each subject boiler.
- a. If oil is burned, the permittee must maintain records of the sulfur content of the fuel oil either by obtaining fuel supplier certifications or sampling and analyzing the fuel oil in accordance with ASTM procedures.
 - b. If relying on fuel samples for demonstrating compliance with the fuel sulfur content limits, a sample must be collected and analyzed after each shipment of fuel is added to the storage tank.
- 3.7 NSPS boiler Reporting Requirement** Unless an approved alternate monitoring frequency is obtained from the EPA Administrator, the permittee must submit semi-annual reports for periods during which oil was burned that include the following information:
- a. The calendar dates covered in the reporting period;
 - b. Each 30-day average sulfur content (weight percent), calculated during the reporting period, ending with the last 30-day period in the quarter; including:
 - i. reasons for any noncompliance with the emission standards; and
 - ii. a description of corrective actions taken.

- c. If fuel supplier certifications are used to demonstrate compliance, records of fuel supplier certifications that include:
- i. For distillate oil:
 - The name of the oil supplier; and
 - A statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR §61.41c.
 - ii. For residual oil:
 - The name of the oil supplier;
 - The location of the oil when the sample was drawn for analysis to determine the sulfur content of the oil, specifically including whether the oil was sampled as delivered to the facility, or whether the sample was drawn from oil in storage at the oil supplier's or oil refiner's facility, or other location;
 - The sulfur content of the oil from which the shipment came (or of the shipment itself); and
 - The method used to determine the sulfur content of the oil.

Note: If using ASTM grade 3, include the most relevant information depending on whether the blend exhibits the characteristics of a distillate or residual oil

- d. If residual oil is burned in the boiler and the heat input is greater than 30 million Btu/hr, the semi-annual report must include a summary of any excess visible emissions recorded by the COMS.
- e. The initial semi-annual report must be postmarked by the 30th day of the third month following the actual date of startup. Each subsequent semi-annual report must be postmarked by the 30th day following the end of the reporting period.

3.8 Recordkeeping

The permittee must maintain on-site, records of the amount and type of fuels burned each day, unless an alternate frequency is obtained from EPA, for a period of at least two (2) years.

3.9 Construction or Modification

In addition to the Notice of Intent to Construct (NC) requirement in Condition 8.6, the permittee must notify LRAPA and the EPA when equipment becomes subject to NSPS as summarized below:

If	Notification of	Due Date
Constructing or installing a new affected NSPS boiler	The date construction began	Within 30 days of commencing construction
	Actual start-up date	Within 15 days after start-up
Modifying existing equipment	The nature of the change, present and future emissions, productive capacity differences, expected completion date of change	60 days prior to expected completion date

3.10 EPA Submittal Address

All submittals to the EPA must be sent to the following address:

Director
 Air and Waste Management Division
 EPA Region X
 Mail Stop OAQ-107
 1200 Sixth Avenue
 SEATTLE, WA 98101-3123

4.0 OPERATION AND MAINTENANCE REQUIREMENTS

4.1 Work practices The permittee must perform a maintenance service on each boiler at least once in every 2-year period. As a minimum, the service must include an inspection of the burners and refractory chamber; cleaning, adjustment, and repair as necessary. For water tube boilers, the service must include flushing the tubes.

4.2 Veneer Dryers Each veneer dryer and associated pollution control equipment must be maintained and operated at full efficiency and effectiveness so that the emissions of air contaminants is kept at the lowest practicable levels.

5.0 PLANT SITE EMISSION LIMITS

5.1 Plant Site Emission Limits (PSEL)

Plant site emissions must not exceed the following:

Pollutant	Limit	Units
PM	24	tons per year

PM ₁₀	14	tons per year
SO ₂	39	tons per year
NO _x	39	tons per year
CO	99	tons per year
VOC	39	tons per year
Single HAP	9	tons per year
Combined HAPs	24	tons per year

5.2 Annual Period The annual plant site emissions limits apply to any 12-consecutive calendar month period.

6.0 COMPLIANCE DEMONSTRATION

6.1 PSEL Compliance Monitoring for PM, PM₁₀, SO₂, NO_x, CO, VOC and HAP Compliance with the PSEL is determined for each 12-consecutive calendar month period based on the following calculation for each pollutant for all processes other than surface coating operations:

$$E = \frac{\sum(EF \times F)}{2000}$$

where,

E = pollutant emissions (tons/yr);
 EF = pollutant emission factor (see Condition 6.3);
 F = fuel combustion or material throughput (see Condition 7.1.d)

6.2 VOC and HAP PSEL Compliance Monitoring for Surface Coating Operations Compliance with the VOC or HAP PSEL is determined for each 12-consecutive calendar month period based on the following calculation plus the emissions calculated in Condition 6.1:

$$E_{\text{VOC or HAP}} = [\sum(C_X \times D_X \times K_X) - W] \times 1 \text{ ton}/2000 \text{ lb.}$$

where,

E_{VOC} = VOC or HAP emissions (tons/yr);
 C = Material usage for the period in gallons;
 D = Material density in pounds per gallon;
 if K is in units of lb/lb, otherwise D = 1.
 K = VOC or HAP content of the material (lb/lb);
 X = Subscript X represents a specific material;
 W = Weight of VOC or HAP shipped offsite (lbs).

6.3 Emission Factors The permittee must use the default emission factors provided in Section 12.0 for calculating pollutant emissions, unless alternative

emission factors are approved by LRAPA. The permittee may request or LRAPA may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by LRAPA.

6.4 Source Test requirement

During the permit term, the permittee must demonstrate that each wood fired boiler is capable of operating at its maximum operating capacity in compliance with Condition 2.2 by conducting a source test for particulate matter emissions using EPA Methods 1-4 and DEQ Method 5.

- a. The following parameters must be monitored and recorded during the source test:
 - i. visible emissions as measured by EPA Method 9 for a minimum period of 6 minutes during or within 30 minutes before or after each DEQ Method 5 test run;
 - ii. boiler steam rate (pounds per hour);
 - iii. O₂ and CO₂ concentration in the stack gas as measured by EPA Method 3 or 3A, (% dry basis);
 - iv. pollution control device operating parameters;
 - v. fuel characteristics (e.g., species, ratio of bark and white wood, moisture content, and percent less than 1/8"); and
 - vi. and other information requested in the source test plan approval.
- b. All tests must be conducted in accordance with the ODEQ's *Source Sampling Manual* and with the pretest plan submitted at least 15 days in advance and approved by the LRAPA Source Test Coordinator. Test data and results must be submitted for review to the LRAPA Source Test Coordinator within 45 days unless otherwise approved in the pretest plan.
- c. Only regular operating staff may adjust the combustion system or production processes and emission control parameters during the source test and within 2 hours prior to the tests. Any operating adjustments made during the source test, which are a result of consultation during the tests with source testing personnel, equipment vendors or consultants, may render the source test invalid.

6.5 Veneer Dryers

- a. LRAPA may require any veneer dryer facility to establish

an effective program for monitoring the visible air contaminant emissions from each veneer dryer emission point.

- 6.6 a. The program shall be subject to review and approval by LRAPA and must consist of a specified minimum frequency for performing visual opacity determinations on each veneer dryer emission point and a specified period during which all records shall be maintained at the mill site for inspection by authorized representatives of LRAPA
- 6.7 a. All data obtained must be recorded on copies of a "Veneer Dryer Visible Emissions Monitoring Form" which shall be provided by LRAPA or on an alternative form which is approved by LRAPA.

7.0 RECORDKEEPING REQUIREMENTS

7.1 Operation and Maintenance

The permittee must maintain the following records related to the operation and maintenance of the plant and associated air contaminant control devices:

- a. Maintenance log and operation and maintenance plan as required in Section 4.0; and
- b. Sulfur content from vendor certification of each shipment of fuel oil, if used at the plant.
- c. Monthly and annual operating parameters as shown in the table below:

Emissions Unit	Process Parameter	Units
Natural gas-fired boilers or heaters	fuel combusted	cubic feet (ft ³)
Propane, butane, or oil-fired boilers or heaters	fuel combusted	gallons
Wood-fired boilers	steam production	pounds of steam
Cyclones	material throughput by type of material	bone dry ton (BDT)
Kiln	material throughput	thousand board feet (MBF)

Veneer Dryer	material throughput	thousand square feet (MSF)
Surface Coating VOCs	material usage	gallons or pounds
	VOC content	pounds per gallon or weight %
	HAP content (single and combined)	pounds per gallon or weight %

- 7.2 Excess Emissions** The permittee must maintain records of excess emissions as defined in LRAPA Title 36 (recorded on occurrence). Typically, excess emissions are caused by process upsets, startups, shutdowns, or scheduled maintenance. One example of excess emissions is when visible emissions are greater than 20% opacity for 3 minutes or more in any 60-minute period.
- 7.3 Complaint Log** The permittee must maintain a log of all written complaints and complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.
- 7.4 Retention of Records** Unless otherwise specified, all records must be maintained on site for a period of two (2) years and made available to LRAPA upon request.

8.0 REPORTING REQUIREMENTS

- 8.1 Excess Emissions** The permittee must notify LRAPA by telephone or in person of any excess emissions which are of a nature that could endanger public health.
 - a. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the LRAPA office identified in Condition 9.3.
 - b. If the excess emissions occur during non-business hours, the permittee must notify the Department by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
 - c. The permittee must also submit follow-up reports when required by LRAPA.
- 8.2 Complaint log** The permittee must maintain a log of all written complaints and

complaints received via telephone that specifically refer to air pollution concerns associated to the permitted facility. The log must include a record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

8.3 Annual Report

The permittee must submit to LRAPA by **February 15** of each year this permit is in effect, two (2) copies of the following information for the preceding calendar year:

- a. Annual emissions as calculated according to Conditions 6.1 and 6.2, including the supporting process parameter and emission factor information.
- b. Records of all planned and unplanned excess emissions events.
- c. Summary of complaints relating to air quality received by permittee during the year.
- d. List permanent changes made in plant process, production levels, and pollution control equipment which affected air contaminant emissions.
- e. List major maintenance performed on pollution control equipment.

8.4 Initial Startup Notice

The permittee must notify LRAPA in writing of the date a new facility is started up. The notification must be submitted no later than seven (7) days after startup.

8.5 Notice of Change of Ownership or Company Name

The permittee must notify LRAPA in writing using a LRAPA "Permit Application Form" within 60 days after the following:

- a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
- b. Sale or exchange of the activity or facility.

8.6 Construction or Modification Notices

The permittee must notify LRAPA in writing using a LRAPA "Notice of Construction Form," or "Permit Application Form," and obtain approval in accordance with LRAPA Title 34 Section 34-010 through 34-038 before:

- a. Constructing or installing any new source of air contaminant emissions, including air pollution control equipment;
- b. Modifying or altering an existing source that may significantly affect the emission of air contaminants;
- c. Making any physical change which increases emissions;

- d. Changing the method of operation, the process, or the fuel use, or increasing the normal hours of operation that result in increased emissions.

8.7 Where to Send Reports and Notices The reports, with the permit number prominently displayed, must be sent to the Permit Coordinator for the LRAPA office as identified in Condition 9.2.

9.0 ADMINISTRATIVE REQUIREMENTS

9.1 Reassignment to the General Permit A complete application for reassignment to this permit is due within 60 days after the permit is reissued. LRAPA will notify the permittee when the permit is reissued. The application must be sent to the appropriate regional office.

- a. If LRAPA is delinquent in renewing the permit, the existing permit will remain in effect and the permittee must comply with the conditions of the permit until such time that the permit is reissued and the source is reassigned to the permit.
- b. The permittee may submit an application for either a Simple or Standard ACDP at any time, but the permittee must continue to comply with the General ACDP until LRAPA takes final action on the Simple or Standard ACDP application.
- c. If a complete application for reassignment to the general permit or Simple or Standard ACDP is filed with LRAPA in a timely manner, the permit will not be deemed to expire until final action has been taken on the application.

9.2 Permit Coordinator Address All reports, notices, and applications should be directed to the Permit Coordinator as follows:

Lane Regional Air Protection Agency
1010 Main Street
Springfield, OR 97477
Telephone: (541) 736-1056

9.3 LRAPA Contacts Information about air quality permits and LRAPA's regulations may be obtained from the LRAPA web page at www.lrapa.org. All inquiries about this permit should be directed to the LRAPA office listed in 9.2 above.

10.0 FEES

- 10.1 Annual Compliance Fee** The Annual Compliance Determination Fee specified in LRAPA Title 37, Section 37-0090, Table 2, Part 2(c) for a Class Three General ACDP is due on **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by LRAPA regulations, will be mailed prior to the above date.
- 10.2 Change of Ownership or Company Name Fee** The non-technical permit modification fee specified in LRAPA Title 37, Section 37-0090, Table 2, Part 3(a) is due with an application for changing the ownership or the name of the company of a source assigned to this permit.
- 10.3 Where to Submit Fees** Fees must be submitted to:
Lane Regional Air Protection Agency
1010 Main Street
Springfield, OR 97477
Telephone: (541) 736-1056

11.0 GENERAL CONDITIONS AND DISCLAIMERS

- 11.1 Other Regulations** In addition to the specific requirements listed in this permit, the permittee must comply with all other legal requirements enforceable by LRAPA.
- 11.2 Conflicting Conditions** In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply.
- 11.3 Masking of Emissions** The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety, or welfare of any person or otherwise violate any other regulation or requirement.
- 11.4 LRAPA Access** The permittee must allow LRAPA's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468-095.
- 11.5 Permit Availability** The permittee must have a copy of the permit available at the facility at all times.

- 11.6 Open Burning** The permittee may not conduct any open burning except as allowed by LRAPA Title 47.
- 11.7 Asbestos** The permittee must comply with the asbestos abatement requirements in LRAPA Title 43 for all activities involving asbestos-containing materials, including, but not limit to, demolition, renovation, repair, construction, and maintenance.
- 11.8 Property Rights** The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.
- 11.9 Termination, Revocation, or Modification** LRAPA may modify or revoke this permit pursuant to Section 37-0060(3) and (4).

12.0 EMISSION FACTORS

- 12.1** The permittee shall use the emission factors provided in the attachment to the review report for PSEL compliance monitoring required by Condition 6.0

13.0 ABBREVIATIONS, ACRONYMS, AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit	gal	gallon(s)
ASTM	American Society for Testing and Materials	gr/dscf	grains per dry standard cubic foot
AQMA	Air Quality Maintenance Area	HAP	Hazardous Air Pollutant as defined by LRAPA Title 44
calendar year	The 12-month period beginning January 1st and ending December 31st	ID	identification number
CFR	Code of Federal Regulations	I&M	inspection and maintenance
CO	carbon monoxide	lb	pound(s)
DEQ	Oregon Department of Environmental Quality	LRAPA	Lane Regional Air Protection Agency
dscf	dry standard cubic foot	MBF	1000 board feet
EPA	US Environmental Protection Agency	MLF	1000 linear feet
FCAA	Federal Clean Air Act	MMBtu	million British thermal units
		MSF	1000 square feet
		NA	not applicable

NESHAP	National Emissions Standards for Hazardous Air Pollutants	PSEL	Plant Site Emission Limit
NO _x	nitrogen oxides	PTE	Potential to Emit
NSPS	New Source Performance Standard	RACT	Reasonably Available Control Technology
NSR	New Source Review	scf	standard cubic foot
O ₂	oxygen	SER	Significant Emission Rate
OAR	Oregon Administrative Rules	SIC	Standard Industrial Code
ORS	Oregon Revised Statutes	SIP	State Implementation Plan
O&M	operation and maintenance	SO ₂	sulfur dioxide
Pb	lead	Special Control Area	as defined in LRAPA Title 29
PCD	pollution control device	VE	visible emissions
PM	particulate matter	VOC	volatile organic compound
PM ₁₀	particulate matter less than 10 microns in size	year	A period consisting of any 12 consecutive calendar months
ppm	part per million		
PSD	Prevention of Significant Deterioration		

Max/maa/tjj/msf:3/27/07
AQGP-010, sawmills&millwork

Lane Regional Air Protection Agency

**GENERAL
AIR CONTAMINANT DISCHARGE PERMIT
ASSESSMENT REPORT**

WOOD PRODUCTS

SOURCE DESCRIPTION AND QUALIFICATION

1. This General Permit is designed to regulate air contaminant emissions from wood products facilities, including sawmills, planing mills, millwork facilities, veneer peeling, veneer drying, and plywood production facilities.
2. The facilities assigned to this General Permit have no other air pollution sources which require regulation beyond that specified in this permit, or have other pollution sources that also qualify for General Permits. Facilities eligible for assignment to this permit have not experienced recurring or serious compliance problems.

ASSESSMENT OF EMISSIONS

3. Facilities assigned to this General Permit are primarily sources of PM and PM₁₀. Many of the facilities have boilers for producing steam that is used in the production processes. Boilers are also sources of PM and PM₁₀, as well as SO₂, CO, NO_x, and VOC emissions. The type of fuel (wood, natural gas or oil) used in boilers affects the levels of these emissions, as will drying kilns and surface coating operations. Some facilities have lumber drying kilns and/or coating (painting) operations that are also sources of VOC. Source coating operations may also emit hazardous air pollutants (HAPs).
4. LRAPA has assessed the level of emissions of all air pollutants from these facilities and determined that facilities complying with the operational limits and monitoring requirements of this permit have emission levels below the established levels of concern stated in Tables 2 and 3 of LRAPA Title 12.

SPECIFIC AIR PROGRAM APPLICABILITY

5. Facilities assigned to this General Permit are subject to the general visible emissions standards, nuisance requirements (control of fugitive dust and odors), particulate matter standards, and fuel sulfur limits in LRAPA Title 32. The permit contains requirements and limitations to ensure compliance with these standards.
6. Some of the facilities assigned to this General Permit are subject to federal New Source Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units found in Title 40, Code of Federal Regulations, Part 60, Subpart Dc. Facilities for

which construction, modification, or reconstruction was commenced after June 9, 1989 are subject to these federal requirements, which include sulfur limits for fuel oil. The permit contains requirements and limitations to ensure compliance with these federal standards.

COMPLIANCE ASSURANCE

7. Permittees are required to demonstrate compliance with the emission limits for wood fired boilers by conducting a stack source test within 2 years after being assigned to the permit.
8. Permittees are required to maintain records of production, fuel use, upset conditions, and complaints received at the facility. These items are reported to LRAPA annually.
9. LRAPA staff members perform site inspections of the permitted facilities on a routine basis, and more frequently if complaints are received.

REVOCAION OF ASSIGNMENT

10. Any facility that fails to demonstrate compliance, generates complaints, or fails to conform to the requirements and limitations contained in the permit may have its assignment to the General Permit revoked. The facility would then be subject to a higher, more stringent level of permitting.

PUBLIC NOTICE

11. General Air Contaminant Discharge Permits are incorporated into LRAPA Rules and Regulations by reference and are part of the State Implementation Plan. As part of the rulemaking process, the public will be provided at least 30 days to submit written comments or may provide oral testimony at a public hearing that will be held at the end of the comment period. Notice of when and where the hearings will be held will be provided at least 30 days in advance of the hearings. LRAPA will review any comments and may modify the permits in response to the comments. The final permits will be issued after approval by the LRAPA Director.

AQGP-010r, wood products

7/25/01

Max 4/6/07

1. This attachment contains emission factors for both criteria pollutants and hazardous air pollutants (HAPs). Because many HAP emission factors remain under development, the emission factors provided in this attachment represent the best available data at the time of permit renewal. The use of HAP emission factors in this attachment do not guarantee that facilities will be in compliance with federal requirements for major sources of HAPs. Facilities should use the most reliable emission factors as they become available in the future.
2. Emission Factors (EF) for Boilers
 - a. PM, PM10, SO2, NOX, CO and VOC

Fuel type	Boiler type or controls	EF units	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Natural Gas	Uncontrolled	lb/million cubic feet	2.5	2.5	1.7	100	84	5.5
	"Low NO _x " burners	lb/million cubic feet	2.5	2.5	1.7	50	84	5.5
	Flue gas recirculation	lb/million cubic feet	2.5	2.5	1.7	32	84	5.5
Propane	All	lb/1000 gallons	0.6	0.6	0.10S ⁽¹⁾	19	3.2	0.5
Butane	All	lb/1000 gallons	0.6	0.6	0.09S ⁽¹⁾	21	3.6	0.6
#1 distillate oil	All	lb/1000 gallons	3.3	1.7 ⁽²⁾	142S ⁽¹⁾	18	5	0.2 ⁽³⁾
#2 distillate oil	All	lb/1000 gallons	3.3	1.7 ⁽²⁾	142S ⁽¹⁾	20	5	0.2 ⁽³⁾
#4 residual oil	All	lb/1000 gallons	8.5	7.3 ⁽⁴⁾	150S ⁽¹⁾	20	5	0.2 ⁽³⁾
#5 & #6 residual oil	All	lb/1000 gallons	11.5	9.9 ⁽⁴⁾	157S ⁽¹⁾	55	5	0.28 ⁽³⁾
Wood	Dutch oven – uncontrolled	lb/1000 lb of steam	0.4 ⁽⁵⁾	0.2 ⁽⁵⁾	0.014	0.31	3.0	0.13
	Spreader/stoker – uncontrolled	lb/1000 lb of steam	0.4 ⁽⁵⁾	0.2 ⁽⁵⁾	0.014	0.31	2.0	0.13
	Fuel cell - uncontrolled	lb/1000 lb of steam	0.4 ⁽⁵⁾	0.2 ⁽⁵⁾	0.014	0.31	1.0	0.13

(1) The sulfur dioxide emission factor is based on the sulfur content of the fuel expressed as a percent by weight.

For example, if the sulfur content of #1 distillate oil is 0.3%, the emission factor is $142 \times 0.3 = 42.6$ lb/1000 gallons of oil burned.

- (2) PM₁₀ is 50% of total PM. Total PM is the sum of filterable PM and condensible PM. [AP-42 tables 1.3-1, 1.3-2, and 1.3-6]
- (3) VOC reported as non-methane total organic carbon (NMTOC).
- (4) PM₁₀ is 86% of total PM. Total PM is the sum of filterable PM and condensible PM. [AP-42 tables 1.3-1, 1.3-2, and 1.3-5]
- (5) Emission factors for boilers with PM control devices can be determined using the procedures in the section below titled "Wood-fired boiler PM control efficiencies and PM₁₀ fractions".

b. HAPS

Pollutant	Emission Factor lb/MMlbSteam ⁽¹⁾	Reference
Acrolein	4.40	AP-42; 9/03
Formaldehyde	1.43	NCASI TB 858; 2/03
Acetaldehyde	0.91	AP-42; 9/03
Benzene	3.63	NCASI TB 858; 2/03
Styrene	2.09	AP-42; 9/03
Toluene	1.01	AP-42; 9/03
Methanol	0.91	NCASI TB 858; 2/03

⁽¹⁾ Assumes 1100 Btu per pound of steam

c. Wood fired boiler PM control efficiencies and PM₁₀ fractions:

Use the following information to make adjustments to the PM emission factors given in Condition 1 for wood-fired boilers. For example, the PM and PM₁₀ emission factors for a Dutch Oven boiler with a high pressure multiclone would be:

$$EF_{PM} = 0.40 \times (1 - 70\%/100) = 0.12 \text{ lb}/1000 \text{ lb of steam}$$

$$EF_{PM10} = 0.12 \times 95\%/100 = 0.11 \text{ lb}/1000 \text{ lb of steam}$$

Control Device	Estimated Efficiency (%)	PM ₁₀ Fraction (%)
Uncontrolled	NA	50
Multiclone (low pressure)	50	50
Multiclone (high pressure)	70	95
Wet scrubber (low pressure)	70	80
Wet scrubber (medium to high pressure)	80	95
Electrostatic precipitator (wet or dry)	95	100

3. Emission Factors for Cyclones and Target Boxes

Process Equipment	Type	Description	Units	PM (lb/BDT)	PM ₁₀ (lb/BDT)
Cyclone	Medium Efficiency	Dry & Green Chips, Shavings, Hogged Fuel/Bark, Green Sawdust	Bone Dry Tons (BDT)	0.5	0.25
	High Efficiency			0.2	0.16
	Baghouse Control			0.001	0.001
	Medium Efficiency	Sanderdust		NA	NA
	High Efficiency			2.0	1.6
	Baghouse Control			0.04	0.04
Target Box	Medium Efficiency	Sanderdust	Bone Dry Tons (BDT)	0.1	0.05

4. Emission Factors for Steam and Electric Heated Kilns (lb/1000 board feet)¹

Wood species	PM/PM ₁₀	VOC ⁽²⁾	Methanol	Formaldehyde	Acetaldehyde
Ponderosa Pine	0.02 ⁽³⁾	1.7 ⁽⁴⁾	0.07 ⁽⁴⁾	0.003 ⁽⁴⁾	0.113 ⁽¹⁰⁾
Lodgepole Pine	0.02 ⁽³⁾	1.3 ⁽⁴⁾	0.06 ⁽⁴⁾	0.004 ⁽⁴⁾	0.113 ⁽¹⁰⁾
Douglas Fir	0.02 ⁽⁵⁾	0.6 ⁽⁶⁾	0.02 ⁽⁴⁾	0.001 ⁽⁴⁾	0.057
White Fir	0.05 ⁽⁷⁾	0.33 ⁽⁴⁾	0.12 ⁽⁴⁾	0.003 ⁽⁴⁾	0.113 ⁽¹⁰⁾
Hemlock	0.05 ⁽⁵⁾	0.39 ⁽⁸⁾	0.128 ⁽⁸⁾	0.003 ⁽⁹⁾	0.113 ⁽¹¹⁾

(1) Use source specific data, if available

(2) VOC emissions factors are based on propane, using the carbon based results from the cited studies and multiplying by 44/36.

(3) No data, use Douglas Fir

(4) Oregon State University (OSU) kiln study, 2000 (NCASI)

(5) OSU kiln study, 1998 (WI)

(6) University of Idaho kiln study, 1996 (NCASI), average of heart and sap results

(7) No data, use Hemlock

(8) Emissions from Western Hemlock lumber during drying, Milota & Mosher (2006)

(9) No data, use White Fir

(10) No data, use Hemlock

(11) Average of Rosboro and Hampton tests at OSU

5. Emission Factors for Veneer Dryers (lb/1000 square feet, 3/8" basis)

PM/PM₁₀, NO_x, and CO:

Process Equipment	Description	PM/PM ₁₀	NO _x	CO
Veneer Dryer - Gas heat	Douglas Fir (uncontrolled)	0.52	0.12	0.02
	(Burley or 45% control)	0.29		
	Hemlock, White Fir (uncontrolled)	0.15		
	(Burley or 45% control)	0.10		
Veneer Dryer - Steam heat	Douglas Fir (uncontrolled)	1.01	none	
	(Burley or 45% control)	0.56		
	Hemlock, White Fir (uncontrolled)	0.25		
	(Burley or 45% control)	0.15		

6. VOC and Hazardous Air Pollutants: These factors are based on recent studies performed on **softwoods** by NCASI. EPA incorporated NCASI's data into AP-42, but did not distinguish between southern and northwest softwood species. Therefore, the highest average test result is included in this permit as a conservative estimate of emissions. The VOC emission factors have been adjusted to a propane basis by the multiplying the carbon basis by a factor of 44/36. All emission factors are in units of pounds per 1000 square feet on a 3/8" basis (lb/MSF).

Dryer type/activity	Pollutant	Steam heated	Direct Wood-Fired	Direct Natural Gas-Fired
Veneer Dryers	VOC	1.8	1.0	3.1
	Acetaldehyde	0.022	ND ⁽¹⁾	0.062
	Acrolein	0.001	ND	0.0009
	Formaldehyde	0.03	0.045	0.064
	Methanol	0.04	ND	0.036
	Phenol	0.003	ND	0.006
	Propionaldehyde	0.0044	ND	0.0016
	Benzene	0.0012		
	Toluene	0.0032	ND	ND
m, p-xylene	0.0012	ND	ND	

(1) ND = No Data

Dryer type/activity	Pollutant	Steam heated	Direct Wood-Fired	Direct Natural Gas-Fired
Cooling Section	VOC	0.08	ND ⁽¹⁾	0.05
	Acetaldehyde	0.004	ND	0.003

Dryer type/activity	Pollutant	Steam heated	Direct Wood-Fired	Direct Natural Gas-Fired
	Acrolein	0.008	ND	BDL
	Formaldehyde	0.002	ND	0.002
	Methanol	0.005	ND	0.006
	Phenol	0.0003	ND	BDL
	Propionaldehyde	0.002	ND	0.002
Fugitives	VOC	0.06	ND	0.046
	Acetaldehyde	0.005	ND	0.003
	Formaldehyde	0.001	ND	0.002
	Methanol	0.01	ND	0.006
	Phenol	0.006	ND	0.01

(1) ND = No Data

7. Plywood Presses (lb/MSF⁽¹⁾)

Pollutant	Softwood Emission Factor
VOC	0.07
Acetaldehyde	0.007
Formaldehyde	0.002
Methanol	0.04
Phenol	0.006
Propionaldehyde	0.003

(1) MSF = 1000 ft²

8. Miscellaneous Plywood Activities

Pollutant	I-J CC ⁽¹⁾ (lbs/MLF)	I-J Saw ⁽²⁾ (lbs/MLF)	Log Vats (lbs/MSF 3/8")	Trim Chip (lbs/MLF 3/8")	Sander (lbs/MSF)	Skin Saw (lbs/MSF)
VOC	0.003	0.11	ND ⁽³⁾	0.068	0.18	0.088
Acetaldehyde	BDL ⁽⁴⁾	BDL	0.005	BDL	0.003	0.0009
Formaldehyde	0.0002	BDL	BDL	BDL	0.002	0.0003
Methanol	0.0006	0.016	0.007	0.008	0.012	0.012

(1) I-Joist Conditioning Chamber

(2) I-Joist Saw

(3) ND=No Data

(4) BDL=Below Detection Limits

9. Emission Factors for Surface Coating Operations Consult manufacturer or Material Safety Data Sheet for required information needed to calculate emissions.