

**LANE REGIONAL AIR PROTECTION AGENCY
TITLE V OPERATING PERMIT REVIEW REPORT**

**Veneer Technologies – Eugene, OR
195 North Bertelsen Road
Eugene, Oregon 97402**

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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit	MBF	1,000 Board feet
Act	Federal Clean Air Act	MSF	1,000 Square feet 3/8" basis
ASTM	American Society of Testing and Materials	MSDS	Material Safety Data Sheets
		MeOH	Methanol
BDT	Bone dry ton	NA	Not applicable
BDU	Bone dry unit	NO _x	Nitrogen oxides
BF	Board feet	NESHAP	National Emission Standard for Hazardous Air Pollutant
Btu	British thermal unit		
CEMs	Continuous emission monitoring system	NSPS	New Source Performance Standards
CFR	Code of Federal Regulations	NSR	New Source Review
CO	Carbon Monoxide	O ₂	Oxygen
CPMS	Continuous parameter monitoring system	OAR	Oregon Administrative Rules
		ODEQ	Oregon Department of Environmental Quality
DEQ	Department of Environmental Quality	ORS	Oregon Revised Statutes
dscf	Dry standard cubic feet	O&M	Operation and maintenance
EF	Emission factor	PF	Phenol-Formaldehyde
EPA	US Environmental Protection Agency	Pb	Lead
		PCD	Pollution Control Device
ERC	Emission Reduction Credit	PM	Particulate matter
EU	Emissions Unit	PM ₁₀	Particulate matter less than 10 microns in size
FCAA	Federal Clean Air Act		
FSA	Fuel sampling and analysis	ppmv	Parts per million by volume
gr/dscf	Grain per dry standard cubic foot (1 pound = 7000 grains)	ppm	Parts per million
		PSEL	Plant Site Emission Limit
HAP	Hazardous Air Pollutant as defined by OAR 244-0040	psia	pounds per square inch, actual
		RTO	Regenerative Thermal Oxidizer
HCFC	Halogenated Chloro-Fluoro-Carbons	SCHED	Schedule
		SERP	Source emissions reduction plan
HCOH	Formaldehyde	SPEC	Special
ID	Identification number	SO ₂	Sulfur dioxide
I&M	Inspection and maintenance	ST	Source test
LRAPA	Lane Regional Air Protection Agency	VE	Visible emissions
		VMT	Vehicle miles traveled
M	1,000	VOC	Volatile organic compounds
MM	1,000,000		
MB	Material Balance		

INTRODUCTION

1. This is an existing facility applying for a renewal of its existing Title V federal operating permit.

In accordance with OAR 340-218-0120, this review report is intended to provide the legal and factual basis for the draft permit conditions. In most cases, the legal basis for a permit condition is included in the permit by citing the applicable regulation. In addition, the factual basis for the requirement may be the same as the legal basis. However, when the regulation is not specific and only provides general requirements, this review report is used to provide a more thorough explanation of the factual basis for the draft permit conditions.

PERMITTEE IDENTIFICATION

2. Veneer Technologies – Eugene, OR operates a laminated veneer lumber manufacturing facility located at 195 North Bertelsen Road in Eugene, Oregon.

FACILITY DESCRIPTION

3. The Eugene plant receives dry veneer from outside suppliers. In the Laminated Veneer Lumber (LVL) presses, the prepared veneer is subjected to glue, heat, and pressure creating a LVL billet. Some of the LVL billets are transferred to the I-joist department where they are made into flanges for I-joists. Following this I-joist fabrication process, the I-joists are heat cured in an oven. Once cured, they are cut to length and shipped to market. The remaining LVL billets not destined for I-joist flanges are transferred to a secondary manufacturing department in the plant where they are ripped into a variety of widths and lengths for shipment to market as well. Wood residuals are generated throughout the manufacturing process and collected by way of a pneumatic system controlled by baghouses. Pollutants emitted from the process include NO_x, CO, VOC, SO₂, and PM/PM₁₀ from gas combustion, VOCs (primarily methanol, formaldehyde, and phenol) from glue curing in the LVL presses and I-joist oven, and PM/PM₁₀ from wood residual handling.

OPERATING SCENARIO

4. The facility has a single operating scenario.

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

5. The emissions units at this facility are the following:

Emission Unit Description	EU ID	Pollution Control Device Description	PCD ID
Wood Residual Handling System	WRH	Baghouses 1, 2, & 3	BH-1, BH-2, & BH-3
Laminated Veneer Lumber (LVL) Presses 1-11	Presses	None	NA
I-Line Process	I-Line	None	NA

Emission Unit Description	EU ID	Pollution Control Device Description	PCD ID
I-Line Oven	I-Oven	None	NA
Aggregate Insignificant – includes: Carpentry Shop (PM/PM ₁₀) Fire Suppression Abort (PM/PM ₁₀) Misc. Hand Tool Use (PM/PM ₁₀) Press Lube Emissions (PM/PM ₁₀) Product Sealant (VOC) Ink (VOC) Sawdust Dumpsters (PM/PM ₁₀) Billet Reclaim Saw (PM/PM ₁₀)	AI	None	NA

6. Wood Residual Handling System (WRH): The wood residual handling system consists of several material handling cyclones, each of which vents to one of three (3) baghouses, BH1, BH2, and BH3. BH1 was manufactured by Western Pneumatics with 9:1 design air to cloth ratio, 630 bags, and was installed in 1990. BH2 was manufactured by Carothers with 10:1 design air to cloth ratio, 460 bags, and was installed in 1979. BH3 was manufactured by Carter Day with 10:1 design air to cloth ratio, 36 bags, and was installed in 1989. The wood residuals are blown to overhead truck bins which emit fugitive particulate when material is transferred to wood residual trucks.
7. Presses 1-11 (Presses): The following are details of the existing presses: Press 1 was installed in 2004. Presses 2 and 3 were installed in 2000. Presses 4, 5 and 8 were installed in 2001. Press 7 and 9 were installed in 1999. Presses 6, 10 and 11 have been authorized for construction but not yet installed.
8. I-Line: Adhesive is applied to web and flange material to manufacture structural I-joists. The process was installed in 1972 and has a maximum rated design capacity of 328,000 lb of adhesive used per month.
9. I-Line Oven (Oven): Natural gas burners heat the I-Line oven chamber to cure the adhesive. The original oven was installed in 1973 but later replaced in 1981 by a new oven. The newer oven has two Maxon natural gas fired burners with a rated design capacity of 3.5 MMbtu/hr.
10. Aggregate Insignificant (EU-AI): Aggregate Insignificant include emissions described below:
 - Carpentry Shop (PM/PM₁₀)
 - Fire Suppression Abort (PM/PM₁₀)
 - Misc. Hand Tool Use (PM/PM₁₀)
 - Press Lube Emissions (PM/PM₁₀)
 - Product Sealant (VOC)
 - Ink (VOC)
 - Sawdust Dumpsters (PM/PM₁₀)
 - Billet Reclaim Saw (PM/PM₁₀)

11. Categorically Insignificant Activities: The facility has the following categorically insignificant activities:
- Constituents of a chemical mixture present at less than 1% by weight of any chemical or compound regulated under divisions 200 through 268 excluding divisions 248 and 262 of this chapter, or less than 0.1% by weight of any carcinogen listed in the U.S. Department of Health and Human Services *Annual Report on Carcinogens* when usage of the chemical mixture is less than 1000,000 pounds/year.
 - Evaporative and tail pipe emissions from on-site motor vehicle operation
 - Distillate oil, kerosene, and gasoline fuel burning equipment rated at less than or equal to 0.4 million Btu/hr
 - Natural gas and propane burning equipment rated at less than or equal to 2.0 million Btu/hr
 - Office activities
 - Food Service Activities
 - Janitorial activities
 - Personal care activities
 - Groundskeeping activities including, but not limited to building painting and road and parking lot maintenance
 - Instrument calibration
 - Maintenance and repair shop
 - Automotive repair shops or storage garages
 - Air cooling or ventilating equipment not designed to remove air contaminants generated by or released from associated equipment
 - Refrigeration systems with less than 50 pounds of charge of ozone depleting substances regulated under Title VI, including pressure tanks used in refrigeration systems but excluding any combustion equipment associated with such systems.
 - Bench scale laboratory equipment and laboratory equipment used exclusively for chemical and physical analysis, including associated vacuum producing devices but excluding research and development facilities.
 - Temporary construction activities
 - Warehouse activities
 - Accidental fires
 - Air Vents from air compressors
 - Air purification systems
 - Electrical charging station
 - Fire Brigade Training
 - Instrument air dryers and distribution
 - Blueprint making
 - Routine maintenance, repair, and replacement such as anticipated activities most often associated with and performed during regularly scheduled equipment outages to maintain a plant and its equipment in good operating condition, including but not limited to steam cleaning, abrasive use, and woodworking
 - Electric motors
 - Storage tanks, reservoirs, transfer and lubricating equipment used for ASTM grade distillate or residual fuels, lubricants, and hydraulic fluids
 - On-site storage tanks not subject to any New Source Performance Standards (NSPS), including underground storage tanks (UST), storing gasoline or diesel used exclusively for fueling of the facility's fleet of vehicles
 - Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment
 - Pressurized tanks containing gaseous compounds
 - Vacuum sheet stacker vents
 - Storm water settling basins
 - Fire suppression and training
 - Paved roads and paved parking lots within an urban growth boundary
 - Hazardous air pollutant emissions of fugitive dust from paved and unpaved roads, except for those sources that have processes or activities that contribute to the deposition and entrainment of hazardous air pollutants from surface soils

- Health, safety, and emergency response activities
- Emergency generators and pumps used only during loss of primary equipment or utility service
- Oil/water separators in effluent treatment systems
- Combustion source flame safety purging on startup

Aggregate Insignificant Activities

12. Aggregate insignificant emissions from activities identified by the permittee are detailed in the following table:

Emissions Source	Pollutants (lbs/yr)		
	PM	PM ₁₀	VOC
Carpentry Shop	50	50	NA
Ink	NA	NA	1000
Product Sealant	NA	NA	50
Press Lube	450	450	NA
Miscellaneous Hand Tool Use	50	50	NA
Fire Suppression Abort System	365	183	NA
Sawdust Dumpsters	25	25	NA
Billet Reclaim Saw	50	50	NA
Totals	990	808	1050

EMISSION LIMITS AND STANDARDS

PLANT SITE EMISSION LIMIT (PSEL) INFORMATION

13. Baseline Emission Rate (BER) Information:

Baseline emission rates are based upon actual estimated emission totals for the 1977 calendar year. Emissions are accounted from WRH, two (2) veneer dryers, one (1) oven, truck loading fugitives, three (3) presses, an I-line process, and aggregate insignificant activities. The detail sheets attached to this report contain the rates, factors and more details about the calculations.

CURRENT PLANT SITE EMISSION LIMITS

14. The plant can be operated as much as 24 hours per day, 7 days per week, and 52 weeks per year.

15. The production rates used as a basis for determining the PSELs are as follows:

Production or Process Parameter	Period	Rate	Units
Microllam LVL production	Annual	9,855,000	cu ft
	Max hourly	2,088	cu ft

Plant Site Emission Limits (PSELs)

16. Components of the PSEL

Pollutant	Netting Baseline (tons/yr)	Components of the PSEL			
		Assigned PSEL (tons/yr)	Pollutant	Unassigned Emissions (tons/yr)	ERCs ¹ (tons/yr)
PM	22.8	4.0	PM	0	19.4
PM ₁₀	21.6	2.6	PM ₁₀	0	19.4
CO	1.2	3.1	CO	0	0
NO _x	5.7	7.8	NO _x	0	15.6
SO ₂	<0.5	<0.5	SO ₂	0	0
VOC	52.6	55.1	VOC	0	0

1. ERCs are the Emission Reduction Credits approved by letter dated April 2, 2007.

For the assigned PSEL, the total annual tons per year are required to be determined as a rolling 12-month total.

The attachment to this report contains calculations of the PSELs.

SIGNIFICANT EMISSION RATE

17. The Plant Site Emission Limit increase over the baseline emissions is less than the Significant Emission Rate (SER) as defined in LRAPA Title 38 rules for all of the pollutants as shown below.

Pollutant	Baseline Emissions (tons/year)	Proposed PSEL (tons/year)	Increase from Baseline (tons/year)	SER (tons/year)
PM	22.8	4.0	-18.8	25
PM ₁₀	21.6	2.6	-19.0	15
CO	1.2	3.1	1.9	100
NO _x	5.7	7.8	2.1	40
VOC	52.6	55.1	2.5	40
SO _x	<0.5	<0.5	0	40

The table above shows that the facility does not have emissions of any pollutant greater than the SER.

HAZARDOUS AIR POLLUTANTS (HAPs)

18. The facility is a major source of Hazardous Air Pollutants (HAPs) because the potential emissions of methanol are greater than 10 tons per year and the total combined HAP emissions are greater than 25 tons per year. The facility is subject to the Plywood and Composite Wood Products MACT (40 CFR 63, Subpart DDDD). The only requirements imposed by that standard are that commencing October 1, 2007, the permittee shall use exclusively non-HAP coatings for Group 1 Miscellaneous Coating Operations. The natural gas fired press heaters were subject to the Commercial and Industrial Boiler NESHAP, 40 CFR Part 63; Subpart DDDDD under the Small Gaseous Fuel Subcategory as an existing source. However, the US Court of Appeals vacated the Boiler MACT in its entirety on June 8, 2007 and the compliance dates and Boiler MACT applicable requirements are no longer in force. The facility has the potential to emit the following HAPs (tons per year):

Pollutant	Potential to Emit (tons/yr)
Acetaldehyde	1.1E-05
Beryllium Compounds	9.4E-07
Cadmium Compounds	8.6E-05
Chromium, total	1.1E-04
Cobalt Compounds	6.6E-06
Dichlorobenzene	3.5E-05
Ethyl Acrylate	1.9E-06
Ethyl Benzene	2.8E-02
Formaldehyde	4.4
Hexane	0.14

Pollutant	Potential to Emit (tons/yr)
Lead Compounds	3.9E-05
Manganese Compounds	3.0E-05
Methanol	38.3
Mercury Compounds	2.0E-05
Naphthalene	4.8E-05
Nickel Compounds	1.6E-04
Phenol	1.5
Polycyclic Organic Matter	4.5E-06
Toluene	0.06
Vinyl Acetate	1.1E-05
Xylene	0.07
Total (tons per year)	44.6

STRATOSPHERIC OZONE DEPLETING REQUIREMENTS

19. The facility does not manufacture, sell, distribute, or use in the manufacturing of a product any stratospheric ozone-depleting substances and the EPA 1990 Clean Air Act, as amended. Sections 601-618 of the act do not apply to the facility except that air conditioning units and fire extinguishers containing Class I or Class II substances must be serviced by certified repairmen to ensure that the substances are recycled or destroyed appropriately.

MONITORING REQUIREMENTS

20. Section 70.6(a)(3) of the federal Title V permit rules, requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V permits. In addition, where the applicable requirement does not require periodic testing or monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that is representative of the source's compliance with the permit.

However, the requirements to include in a permit testing, monitoring, recordkeeping, reporting, and compliance certification sufficient to assure compliance does not require the permit to impose the same level of rigor with respect to all emissions units and applicable requirement situations. It does not require extensive testing or monitoring to assure compliance with the applicable requirements for emissions units that do not have significant potential to violate emission limitations or other requirements under normal operating conditions. Where compliance with the underlying applicable requirement for an insignificant emission unit is not threatened by a lack of a regular program of monitoring and where periodic testing or monitoring is not otherwise required by the applicable requirement, then in this instance, the status quo (i.e., no monitoring) will meet section 70.6(a)(3). For this reason, this permit does not include any monitoring for insignificant emissions units and activities.

The Title V permit does include monitoring for all requirements that apply to significant emissions units in addition to the testing requirements in the permit. Periodic visible emissions observations are required for all particulate emissions sources. In addition, the permit includes monitoring of operating parameters for other emission units and pollution control devices. It is assumed that as long as these processes and controls are properly operated, the particulate emissions levels will be below the emissions limits specified in the permit.

The facility is required to record material production and throughput totals and to estimate actual emissions. The estimations are to be based upon production data, emission factors and estimation methods used in the facility's application or other LRAPA approved method.

GENERAL TESTING REQUIREMENTS

21. This section is provided so that the permittee and LRAPA will know what test methods should be used to measure pollutant emissions in the event that testing is conducted for any reason. This section does not by itself require the permittee to conduct any more testing than was previously included in the permit. Although the permit may not require testing because other routine monitoring is used to determine compliance, LRAPA and EPA always have the authority to require testing if deemed necessary to determine compliance with an emission limit or standard. In addition, the permittee may elect to voluntarily conduct testing to confirm the compliance status. In either case, the methods to be used for testing in the event that testing is conducted are included in the permit. This is true for SIP as well as NSPS emission limits and standards.

SOURCE TEST RESULTS

22. This facility has conducted various source tests to comply with permit requirements. The table below shows the results of the test reports on file at LRAPA.

Emission Device	Test Date	Production Rate During The Test	Results
Baghouse #1	December 2, 1999	Actual Flow Rate = 53,900 acf/min	PM Concentration = 0.0007 gr/dscf Opacity = 0%
Baghouse #1	May 5, 1998	Actual Flow Rate= 71,000 acf/min	PM Concentration = 0.00041 gr/scfd Opacity = 0%

RECORDKEEPING REQUIREMENTS

23. The permit includes requirements for maintaining records of all testing, monitoring, and production information necessary for assuring compliance with the standards and calculating plant site emissions.

REPORTING REQUIREMENTS

24. The permit includes a requirement for submitting semi-annual and annual monitoring reports that include semi-annual compliance certifications. Excess emissions are required to be reported to LRAPA immediately as well as in a logbook attached to the annual report. Emissions fees reports are required annually.

GENERAL BACKGROUND INFORMATION

25. The proposed permit is a renewal of an existing Oregon Title V Operating Permit (No. 208256) which was issued originally issued on June 14, 1999. The permit was originally scheduled to expire on June 14, 2004.
26. The facility is located in an area that has been designated as non-attainment for PM₁₀ and designated as attainment for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead.
27. The facility is located within 100 kilometers of four (4) Class I air quality protection areas.

COMPLIANCE HISTORY

28. Pursuant to the requirements of condition 14 of existing Title V Permit No. 208256 and LRAPA 33-060-3A(2), the facility began performing weekly visible emissions tests using EPA Method 9 in July 1997. Based on the results of these tests, it was determined that the facility was not in compliance with the visible emission standard on several occasions after July 1997. LRAPA issued a Notice of Noncompliance (NON) in October 1997 which required the facility to come into continuous compliance with the standard. On December 18, 1997, LRAPA issued Stipulated Final Order (SFO) No. 97-1427 with the goal of establishing conditions and a schedule to require the facility to operate in compliance with the standard.
29. Condition 16.b of the SFO stated the following: "If TJM determines for one or more of the dryers that process and maintenance procedures are insufficient to ensure compliance . . . TJM shall issue purchase orders for control equipment appropriate to ensure compliance A description of the controls selected and a construction schedule shall be submitted In no event shall the final completion date be later than May 15, 1999."
30. Pursuant to condition 16.b of the SFO, the facility determined that add-on controls were necessary to ensure compliance with the opacity standard. The facility selected a 37,000 scfm regenerative thermal oxidizer (RTO) as the preferred control method and submitted a Notice of Approval to Construct application to LRAPA on July 15, 1998. To allow the facility to begin building the control device as soon as possible, LRAPA issued a conditional Notice of Approval to Construct the device on September 14, 1998. The Notice only authorized construction of the RTO, and prohibited any physical connection to a fuel supply or to the dryers themselves. The facility received LRAPA approval for the removal of the veneer dryers and the modified RTO (T=RTO-1) on November 6, 2006 by way of Approval to Construct NC-208256-C06 and a notice of completion was submitted by the facility on January 18, 2008. The completion notice indicated the two (2) dryers and RTO were removed on April 21, 2007. An Administrative Amendment was submitted by the facility to remove the dryers and RTO and the permit renewal reflects the removal of the veneer dryers and RTO.

31. As of the date of permit issuance, there are no open enforcement actions or non-compliances.

PUBLIC NOTICE

32. This permit was on public notice from March 20, 2008 to April 19, 2008. LRAPA received written comments from the public during the comment period. No request for public hearing was requested or received by LRAPA. The proposed permit was then sent to EPA for a 45 day review period on May 27, 2008. LRAPA requested and EPA agreed to an expedited review of 5 days if there were no substantive or adverse comments during the comment period. The public has 105 days (45 day EPA review period plus 60 days) from the date the proposed permit was sent to EPA to appeal the permit with EPA.

EMISSIONS DETAIL SHEETS

33. The emissions detail sheets are attached. **[attach all ED forms except ED601 Categorically Insignificant Activity forms]**

MAX/cmw
06/30/08