



Lane Regional Air Protection Agency
Construction Air Contaminant Discharge Permit

Review Report

9Wood, Inc.
999 South A Street
Springfield, Oregon 97477
Website: <http://9wood.com/>

Permit No. 209600

Source Information:

Primary SIC	2541
Secondary SIC	--
Primary NAICS	337212
Secondary NAICS	--
Source Categories (LRAPA title 37, Table 1)	Part B: 69. Surface coating operations: coating operations whose actual or

	expected usage of coating materials is greater than 250 gallons per month. Part C: 4. All sources that request a PSEL equal to or greater than the SER for a regulated pollutant.
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	N
Emission Credits	N
Compliance Schedule	N
Source Test [date(s)]	N

COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	3/1
Semi-Annual Report (due date)	3/1, 9/1
GHG Report (due date)	N
Monthly Report (due date)	N

Quarterly Report (due date)	N
Excess Emissions Report	Y
Other Reports (due date)	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	N
Compliance Assurance Monitoring (CAM)	N
Regional Haze (RH)	N
40 CFR Part 68 Risk Management	N
Cleaner Air Oregon (CAO)	N
Synthetic Minor (SM)	N
SM-80	N
Title V	Y
Major FHAP Source	N
Federal Major Source	N
TACT	N
Type A State New Source Review	N
Type B State New Source Review	N
Prevention of Significant Deterioration (PSD)	N

Nonattainment New Source Review (NNSR)	N
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LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS PERMIT

ACDP	Air Contaminant Discharge Permit	MM	Million
AQMA	Air Quality Management Area	MMBtu	Million British thermal units
ACS	Applied coating solids	MMCF	Million cubic feet
Act	Federal Clean Air Act	NA	Not applicable
ASTM	American Society of Testing and Materials	NESHAP	National Emission Standards for Hazardous Air Pollutants
BDT	Bone dry ton	NOx	Nitrogen oxides
Btu	British thermal unit	NSPS	New Source Performance Standards
CAM	Compliance Assurance Monitoring	NSR	New Source Review
CAO	Cleaner Air Oregon	O2	Oxygen
CD ID	Control device identifier	OAR	Oregon Administrative Rules
CEMS	Continuous Emissions Monitoring System	ODEQ	Oregon Department of Environmental Quality
CFR	Code of Federal Regulations	OPR	Operation
CI	Compression Ignition	ORS	Oregon Revised Statutes
CMS	Continuous Monitoring System	O&M	Operation and maintenance
CO	Carbon Monoxide	SB	Lead
CO2	Carbon dioxide	PCD	Pollution Control Device
CO2e	Carbon dioxide equivalent	PM	Particulate matter
COMS	Continuous Opacity Monitoring System	PM2.5	Particulate matter less than 2.5 microns in size
CPDS	Certified Product Data Sheet	PM10	Particulate matter less than 10 microns in size
CPMS	Continuous parameter monitoring system	ppm	Parts per million
DEQ	Department of Environmental Quality	PSEL	Plant Site Emission Limit
dscf	Dry standard cubic feet	psia	pounds per square inch, actual
EF	Emission factor	PTE	Potential to Emit
EPA	US Environmental Protection Agency	QIP	Quality Improvement Plan
EU	Emissions Unit	RICE	Reciprocating Internal Combustion Engine
EU ID	Emission unit identifier	SACC	Semi-Annual Compliance Certification
FCAA	Federal Clean Air Act	SCEMP	Surrogate Compliance Emissions Monitoring Parameter
ft2	Square foot	Scf	Standard cubic foot
FSA	Fuel sampling and analysis	SDS	Safety data sheet
gal	Gallon	SER	Significant emission rate
GHG	Greenhouse Gas	SERP	Source emissions reduction plan
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	SI	Spark Ignition
HAP	Hazardous Air Pollutants as defined by LRAPA title 12	SIC	Standard Industrial Code
HCFC	Halogenated Chlorofluorocarbons	SIP	State Implementation Plan
Hr	Hour	SO2	Sulfur dioxide
ID	Identification number or label	ST	Source test
I&M	Inspection and maintenance	TAC	Toxic air contaminant
Lb	Pound	TACT	Typically Achievable Control Technology
LRAPA	Lane Regional Air Protection Agency	TEU	Toxic Emission Unit
MACT	Maximum Achievable Control Technology	TPY	Tons per year
MBF	Thousand board feet	VE	Visible emissions
MERV	Minimum efficiency reporting values	VMT	Vehicle miles traveled
MFHAP	Metal fabrication or finishing metal hazardous air pollutants	VOC	Volatile organic compounds
		Year	A period consisting of any 12-consecutive calendar month

Permittee Identification

1. 9Wood, Inc. ("the facility") operates a suspended wood ceilings manufacturing facility at 999 South A Street, Springfield, Oregon. The facility began operation at this location in 2005.

General Background

2. The facility uses four (4) spray paint booths known as SB-1 through SB-4 for spray painting suspended wood ceiling components. The manual spray booth SB-1 was constructed in August of 2005. The samples spray booth SB-2 was constructed in August of 2014. The automated spray booth line SB-3 was constructed in June of 2018. Spray booth line SB-4 was constructed in March of 2021. Spray booths SB-1 and SB-2 are manual operations with air drying. Spray booth SB-3 is an automatic spray booth line equipped with eight (8) paint spray heads, although only four (4) heads are operational at any one time. Spray booth SB-3 uses hot water heat supplied by two (2) natural gas-fired boilers each with a maximum heat input rating of 1.26 MMBtu per hour to dry the coating at three different locations on spray booth line SB-3. Only one boiler operates at a time. Spray booth SB-4 is similar to automatic spray booth line SB-3, but is used for research & development and to smooth the transition from sampling to production. Spray booth SB-4 is not equipped with outboard dryers or a conveyance system.

Reasons for Permit Action and Fee Basis

3. On September 19, 2024, the facility submitted an application to install a new baghouse for their Woodworking Operations (AIA-WO). The facility currently uses point of use dust collectors for their Woodworking Operations that exhaust into the building. The facility proposes to upgrade to a more robust and efficient centralized dust collector system. The new dust collector system will have collection points at each machine that are connected to a main trunk line leading to the new baghouse. The wood dust collected by the baghouse will be sent out for disposal.
4. This modification is considered a Type 3 change under subsection 34-035(3) because the combined capacity of the modified emission units included in AIA-WO exceeds the criteria for a Type 1 or Type 2 change, but the modification is not considered a Type 4 change subject to New Source Review under title 38.
5. Because the existing facility is subject to the Title V Operating Permit program, a Construction ACDP is required for Type 3 changes under paragraph 37-0025(1)(b).
6. A Construction ACDP is subject to the initial permitting application fee listed under section 37-8020, Table 2, Part 1. Initial Permitting Application Fees.

Attainment Status

7. The facility is located in an area that has been designated as attainment or unclassified for all criteria pollutants. The facility is inside the Eugene-Springfield UGB as defined in LRAPA 29-0010 which designates the Eugene-Springfield CO and PM₁₀ maintenance areas. The facility is also located inside the Eugene-Springfield UGB as described in the current Eugene-Springfield Metropolitan Area General Plan, as amended. The facility is located within 100 kilometers of three (3) Class I air quality protection areas: Diamond Peak Wilderness, Mount Washington Wilderness and Three Sisters Wilderness area.

Permitting History

8. LRAPA has reviewed and issued the following permitting actions to this facility:

Date Approved/Valid	Permit Action Type	Description
10/03/2010	Simple ACDP	Initial Permit

Date Approved/Valid	Permit Action Type	Description
08/27/2014	NC-209600-A14	Installation of an open face samples spray booth (SB-2)
10/27/2014	Addendum No. 1	Incorporation of NC-209600-A14
03/21/2016	Simple ACDP	Renewal
05/28/2019	Standard ACDP	Initial permit including first automated spray booth (SB-3)
12/18/2020	NC-209600-A20	Installation of R&D automated spray booth (SB-4)
01/25/2021	Addendum No. 1	Incorporation of NC-209600-A20
06/22/2022	Addendum No. 2	Increase the PSEL for VOCs from 99 TPY to 135 TPY.
01/01/2024	Title V Operating Permit	Initial Title V Operating Permit
Upon Issuance	NC-209600-A24	Install new baghouse for Woodworking Operations (AIA-WO)

Emissions Unit Description

Existing Emissions Units

9. The existing emission units regulated by the current Title V Operating Permit are the following:

Emission Unit ID	Emission Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
Significant Emission Units			
SB-1	Manual Spray Booth	DF-1	Dry Filters
SB-2	Samples Spray Booth	DF-2	Dry Filters
SB-3	Automated Spray Booth Line	DF-3	Dry Filters
SB-4	R&D Automated Spray Booth Line	DF-4	Dry Filters

10. Manual Spray Booth (EU: SB-1): Spray booth SB-1 is a manual spray booth using one (1) air assisted airless spray gun. Spray booth SB-1 is used for touch-up and odd shapes. Any touch-up or production activities from this booth are air dried. Overspray from spray booth SB-1 is controlled by dry filters.
11. Samples Spray Booth (EU: SB-2): Spray booth SB-2 is a manual spray booth using one (1) air assisted airless spray gun. Spray booth SB-2 is used for touch-up and odd shapes. Any touch-up or production activities from this booth are air dried. Overspray from spray booth SB-2 is controlled by dry filters.
12. Automated Spray Booth Line (EU: SB-3): Spray booth SB-3 is an automated spray booth line equipped with eight (8) paint spray heads, although only four (4) heads are operational at any one time. This line is the primary production line for the facility, and it coats flat sections of wood components. The spray heads use air assisted airless spray application technology. Overspray from spray booth SB-3 is controlled by dry filters. Spray booth SB-3 uses hot water heat supplied by two (2) natural gas-fired boilers each with a maximum heat input rating of 1.26 MMBtu per hour to dry the coating at three different locations on the automated spray line. The boilers are redundant and only one boiler is operational at a time. The two (2) boilers are considered Categorically Insignificant Activities under LRAPA title 12.
13. R&D Automated Spray Booth Line (EU: SB-4): Spray booth SB-4 is an automated spray booth line equipped with eight (8) paint spray heads, although only four (4) heads are operational at any one time. The spray heads use air assisted airless spray application technology. Unlike spray booth SB-3, spray booth SB-4 is used for research & development and to smooth the transition from

sampling to production. As such, automated spray booth line SB-4 is not equipped with outboard dryers or a production conveyance system. Overspray from spray booth SB-4 is controlled by dry filters.

New or Modified Emissions Units

14. The new or modified emission units regulated by the Construction ACDP after completion of the modification are the following:

Emission Unit ID	Emission Unit Description	Pollution Control Device Description (PCD ID)	Installed / Last Modified
Aggregate Insignificant Activities			
AIA-WO	Woodworking Operations	Baghouse (2024)	2005-2024

15. Woodworking Operations (AIA-WO): The facility accepts already cut to size and larger sized kiln-dried lumber. The larger sized kiln-dried lumber is cut to size onsite. The Woodworking Operations currently include one (1) beam saw, one (1) edge banner, and several table saws and sanders. As part of the Woodworking Operations, the facility also dips the lumber into a fire-retardant solution that air dries prior to coating the wood components. The fire-retardant solution has no VOC or HAPs. All of the current point of use dust collectors exhaust inside the building. The facility proposes to upgrade to a more robust and efficient centralized dust collector system. The new dust collector system will have collection points at each machine that are connected to a main trunk line leading to the new baghouse. The wood dust collected by the baghouse will be sent off-site for disposal.

Nuisance, Deposition and Other Emission Limitations

16. Under LRAPA 49-010(1), the permittee must not cause or allow air contaminants from any source subject to regulation by LRAPA to cause a nuisance. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of the receipt of these complaints.
17. Under LRAPA 32-055, the permittee must not cause or permit the emission of particulate matter which is larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of the receipt of these complaints.
18. Under LRAPA 32-090(1), the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property; such determination is to be made by LRAPA. Compliance is demonstrated through documentation of all complaints received by the facility from the general public and following procedures to notify LRAPA of the receipt of these complaints.

Emission Limitations

19. This facility is subject to the Title V Operating Permit program. This facility has insignificant emissions units (IEUs) that include categorically insignificant activities and aggregate insignificant activities, as defined in LRAPA title 12 and/or OAR 340-200-0020. For the most part, the standards that apply to IEUs are for opacity and particulate matter. The Title V Operating Permit program under OAR 340-218-0050(3)(a) requires all monitoring and analysis procedures or test methods required under applicable requirements be contained in Title V Operating Permits. In addition, where the applicable requirement does not require periodic testing or instrumental or noninstrumental monitoring, periodic monitoring must be prescribed that is sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit. However, the requirements to include periodic monitoring 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 emissions 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 OAR 340-218-0050(3)(a). For this reason, this Construction ACDP includes limited or no requirements for categorically insignificant activities and aggregate insignificant activities.

20. The applicable requirements that apply to AIA-WO are:
- 20.a. AIA-WO is subject to the visible emission limitations under subsection 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity.
 - 20.b. Each individual emissions unit under AIA-WO is subject to particulate matter emission limitations under subsection 32-015(2).
 - 20.b.i. For sources installed, constructed, or modified on or after June 1, 1970 but prior to April 16, 2015, the particulate matter emission limit is 0.14 grains per dry standard cubic foot if there are no representative compliance source test results.
 - 20.b.ii. For sources installed, constructed, or modified on or after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot
 - 20.c. Each individual emissions unit under AIA-WO is subject to the process weight rate emission limitations under subsection 32-045(1). No person may cause, suffer, allow, or permit the emissions of particulate matter in any one (1) hour from any process in excess of the amount shown in section 32-8010, for the process weight rate allocated to such process. Process weight is the total weight of all materials introduced into a piece of process equipment. Liquid and gaseous fuels and combustion air are not included in the total weight of all materials.

Typically Achievable Control Technology (TACT)

21. Subsection 32-008(2) requires new units installed or existing emission units modified on or after January 1, 1994, meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or Type A State NSR in title 38, and applicable NSPS in title 46, or any other standard applicable to only new or modified sources in title 30, title 33, title 39, or title 46 for the regulated pollutant; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.

- 21.a. The following emission units are not subject to TACT because they do not have potential emissions of any criteria pollutant equal to or greater than one (1) ton per year:
Woodworking Operations (AIA-WO).

New Source Performance Standards (NSPS)

22. AIA-WO is not subject to any NSPS.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

23. AIA-WO is not subject to any NESHAP.

Compliance Assurance Monitoring (CAM)

24. AIA-WO is not subject to the provisions of 40 CFR Part 64 – Compliance Assurance Monitoring (CAM), codified under sections 35-0200 through 35-0280, because it does not have any pre-control emissions at or above Title V major source levels for any one (1) pollutant-specific emission unit. The following table evaluates CAM applicability for AIA-WO:

Emission Unit	Regulated Pollutant	Uses a Control Device for a Regulated Pollutant	Uncontrolled Potential Emissions Exceed Major Source Threshold	Is there an Emission Limitation or Standard for this Pollutant	Subject to CAM for the Pollutant	Monitoring Frequency
AIA-WO	PM	Yes	No	Yes	No	--
AIA-WO	PM ₁₀	Yes	No	Yes	No	--
AIA-WO	PM _{2.5}	Yes	No	Yes	No	--

Plant Site Emission Limits (PSELS)

25. Provided below is a summary of the baseline emissions rate, netting basis, plant site emission limit, and potential-to-emit:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)		PTE (TPY)	SER (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)		
PM	NA	0	0	de minimis	de minimis	0.65	24
PM ₁₀	NA	0	0	de minimis	de minimis	0.65	14
PM _{2.5}	NA	0	0	de minimis	de minimis	0.65	9
CO	NA	0	0	de minimis	de minimis	0.52	99
NO _x	NA	0	0	de minimis	de minimis	0.62	39
SO ₂	NA	0	0	de minimis	de minimis	1.1E-02	39
VOC	NA	0	0	135	135	135	39
GHG	NA	0	0	de minimis	de minimis	749	74,000

- 25.a. The facility has no baseline emission rates for PM, PM₁₀, SO₂, NO_x, CO, and VOC because the facility was not in operation during the 1977 or 1978 baseline year. A baseline emission rate is not established for PM_{2.5} in accordance with LRAPA 42-0048(3). The facility has no baseline for GHGs because the facility had no GHG emissions above de minimis during any consecutive 12 calendar month period during calendar years 2000 through 2010.
- 25.b. The netting basis for all pollutants is set at zero because the facility was constructed after the 1977 or 1978 baseline year and the facility has not had any emission increases approved for any of the reasons listed under LRAPA 42-0046(3)(e).
- 25.c. No PSELS were established for PM, PM₁₀, PM_{2.5}, SO₂, CO, NO_x and GHGs because these pollutants will be emitted from the facility at no more than the de minimis emission levels listed in LRAPA title 12. There is no proposed change to the VOC PSEL set in the Standard ACDP issued on June 22, 2022.

Significant Emission Rate

26. The PSEL increase over the netting basis for this modification is less than the Significant Emission Rate (SER) as defined in title 12 for all pollutants emitted above de minimis as shown in the table below.

Pollutant	Proposed PSEL (TPY)	PSEL Increase Over Netting Basis (TPY)	PSEL Increase Due to Utilizing Existing Baseline Period Capacity (TPY)	PSEL Increase Due to Modification (TPY)	SER (TPY)
VOC	135	135	0	0	40

Unassigned Emissions And Emission Reduction Credits

27. The facility has no unassigned emissions for pollutants emitted above de minimis as shown in the table below. Unassigned emissions are equal to the netting basis minus the source's current PTE, minus any banked emission reduction credits. The facility has zero (0) tons of emission reduction credits. In accordance with LRAPA 42-0055 the maximum unassigned emissions may not be more than the SER.

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
VOC	0	135	0	0	40

New Source Review (NSR)

28. The facility is located in a maintenance area for the regulated pollutants CO and PM₁₀. For non-maintenance area pollutants, the federal major source threshold for a non-listed facility is 250 TPY. For maintenance area pollutants, the state major source threshold is 100 TPY. GHGs do not determine federal or state major source applicability. The existing facility is not a federal major source or a state major source.
29. The proposed modification is not subject to Major NSR because the facility is not increasing the PSEL for any pollutant above the federal or state major source thresholds.
30. The proposed modification is not subject to Type A or Type B State NSR because the increase in any regulated pollutant is not equal to or greater than the SER over the netting basis. GHGs are not subject to State NSR.

Short Term NAAQS Compliance

31. A Type 3 change must not cause or contribute to a new exceedance of a National Ambient Air Quality Standard (NAAQS) adopted under title 50 for a new or replaced device or activity. The facility has proposed to install a new baghouse to control particulate matter emissions from AIA-WO. Oregon DEQ has developed trial short term Significant Emission Thresholds (SETs) for the criteria pollutants that have a short-term NAAQS as shown in the table below. If the facility-wide maximum short-term emission rates are below the SETs, the facility is assumed to not cause or contribute to a new exceedance of a NAAQS. For this modification, the only regulated pollutant emitted with a short-term NAAQS is PM_{2.5}. Based on facility-wide potential emissions of PM_{2.5} as shown in the Emission Detail Sheets section of this review report, LRAPA has determined that this Type 3 change will not cause or contribute to a new exceedance of a NAAQS because the facility-wide maximum short-term emission rates are below the SETs for the regulated pollutants emitted by this modification.

Pollutant	Trial SET
24-hour PM _{2.5}	5 lbs/day
1-hour SO ₂	3 lbs/hr
1-hour NO _x	3 lbs/hr

Federal Hazardous Air Pollutants (HAP)/Cleaner Air Oregon Toxic Air Contaminants (TAC)

32. Potential federal HAP emissions from this facility are based on actual annual emissions for a given time period multiplied by a scaling factor based on the ratio of potential operational hours divided by actual operational hours. In addition, although the facility has a PSEL limit on VOCs of 135 TPY, the potential federal HAP emissions presented here have not been reduced proportionally. Potential federal HAP emissions are projected to be 2.26 tons per year, with xylenes having the highest individual federal HAP emissions at 1.23 tons per year. A major source of FHAPs is defined as having potential federal HAP emissions of at least 10 tons per year of any single federal HAP and 25 tons per year of the aggregate of all federal HAPs. This facility does not have potential federal HAP emissions exceeding these thresholds based on the constituents of the current coatings and the facility would normally be considered a minor source of federal HAPs. However, the facility has requested PSEL on federal HAPs be retained in the permit of nine (9) tons per year of any single federal HAP and 24 tons per year of the aggregate of all federal HAPs to allow the facility flexibility in their use of coatings. As such, the facility will be considered a synthetic minor source of federal HAPs.
33. AIA-WO is not considered to emit any significant federal HAPs or state toxic air contaminants, either before or after modification.
34. Under the Cleaner Air Oregon (CAO) program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants (TAC). LRAPA required reporting of approximately 600 TAC in 2016 and 2020 and regulates approximately 260 TAC that have Risk Based Concentrations established in rule. All federal hazardous air pollutants are on the list of approximately 600 TAC. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their TAC. Until then, sources will be required to report TAC emissions triennially.
35. The table below represents the potential emissions of federal HAP and CAO TAC from this facility after modification assuming no elected limitations on PSEL.

CAS Number	Pollutant	PTE (TPY)	HAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	1.9E-05	Yes	Yes
67-64-1	Acetone	17.9	No	Yes
107-02-8	Acrolein	1.7E-05	Yes	Yes
71-43-2	Benzene	3.6E-05	Yes	Yes
71-36-3	n-Butyl Alcohol	4.09	No	Yes
112-34-5	Diethylene Glycol Butyl Ether	3.6E-03	Yes	Yes
100-41-4	Ethyl Benzene	0.25	Yes	Yes
111-76-2	Ethylene Glycol Butyl Ether	0.06	No	Yes
50-00-0	Formaldehyde	0.28	Yes	Yes
822-06-0	Hexamethylene Diisocyanate	8.3E-03	Yes	Yes
100-54-3	Hexane	2.9E-05	Yes	Yes
67-56-1	Methanol	1.8E-01	Yes	Yes
78-93-3	Methyl Ethyl Ketone	2.46	No	Yes
91-20-3	Naphthalene	1.9E-06	Yes	Yes
--	POM (inc. PAHs)	2.5E-06	Yes	Yes
67-63-0	iso-Propyl Alcohol	18.29	No	Yes
115-07-1	Propylene	3.3E-03	No	Yes

CAS Number	Pollutant	PTE (TPY)	HAP	CAO TAC
108-65-6	Propylene Glycol Methyl Ether Acetate	6.14	No	Yes
108-88-3	Toluene	3.1E-01	Yes	Yes
1330-20-7	Xylenes	1.23	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	2.0E-02	No	Yes
Metals				
7440-38-2	Arsenic	1.2E-06	Yes	Yes
7440-41-7	Beryllium	7.5E-08	Yes	Yes
7440-43-9	Cadmium	6.9E-06	Yes	Yes
18540-29-9	Chromium, Hexavalent	8.7E-04	Yes	Yes
7440-48-4	Cobalt	5.9E-04	Yes	Yes
7439-96-5	Manganese	2.4E-06	Yes	Yes
7439-97-6	Mercury	1.6E-06	Yes	Yes
7440-02-0	Nickel	1.3E-05	Yes	Yes
7782-49-2	Selenium	1.5E-07	Yes	Yes
Total (TPY) =		51.2	2.26	51.2

Toxic Release Inventory

36. The Toxics Release Inventory (TRI) is federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment, over which LRAPA has no regulatory authority. It is a resource for learning about toxic chemical releases and pollution prevention activities reported by certain industrial facilities. Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) created the TRI Program. In general, chemicals covered by the TRI Program are those that cause:

- Cancer or other chronic human health effects;
- Significant adverse acute human health effects; or
- Significant adverse environmental effects.

There are currently over 650 chemicals covered by the TRI Program. Facilities that manufacture, process or otherwise use these chemicals in amounts above established levels must submit annual TRI reports on each chemical. NOTE: The TRI Program is a federal program over which LRAPA has no regulatory authority. LRAPA does not guarantee the accuracy of any information copied from EPA's TRI website.

In order to report emissions to the TRI program, a facility must operate under a reportable NAICS code, meet a minimum employee threshold, and manufacture, process, or otherwise use chemicals in excess of the applicable reporting threshold for the chemical. This facility has not reported any emissions to the TRI program because they do not manufacture, process, or otherwise use chemicals in excess of the applicable reporting thresholds.

Compliance History

37. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since the facility began operation:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	02/12/2013	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	05/18/2023	Not in compliance

38. LRAPA has issued the following violation notices and/or taken the following enforcement actions

against this facility since the facility began operation:

- 38.a. An informational inspection was performed on January 23, 2019 to view automated spray coating line (SB-3). Based upon this visit, it was determined that automated spray coating line (SB-3) was installed without approval from LRAPA and that the facility VOC emissions exceeded the VOC PSEL of 39 tons per year in the Simple ACDP. As a result, LRAPA initiated enforcement action and the facility applied for a Standard ACDP as required under title 37. Notice of Non-Compliance (NON) 3751 was issued on February 6, 2019 for failing to notify LRAPA of the construction of automated spray coating line (SB-3), for not receiving the appropriate LRAPA approvals prior to the installation and operation of automated spray coating line (SB-3), and for exceeding the VOC PSEL of 39 tons per year. A civil penalty in the amount of \$3,800 was assessed. The facility paid the fine and the file was closed.
- 38.b. During the full compliance evaluation performed on May 18, 2023, the facility was determined to not be in compliance with Conditions 9.c. and 15.c. of the Standard ACDP. These conditions require the facility to record visible emission monitoring of emission units SB-1, SB-2, SB-3, and SB-4.

Source Testing History

- 39. The facility is not required to conduct performance testing. LRAPA is not aware of any performance testing conducted at this facility.

Recordkeeping Requirements

- 40. The facility is not required to keep and maintain any specific records related to the operation of aggregate insignificant activities.

Reporting Requirements

- 41. The facility is not required to submit any reports specific to aggregate insignificant activities.

Public Notice

- 42. Pursuant to paragraph 37-0052(5)(a), issuance of a Construction ACDP requires a Category III public notice under title 31. In accordance with paragraph 31-0033(3)(c), LRAPA will provide public notice of the proposed permit action and a minimum of 35 days for interested persons to submit written comments.

The draft permit was on public notice from November 7, 2024 to December 13, 2024. No written comments were submitted during this public comment period. No public hearing was requested by ten (10) or more individuals or an individual representing a group of more than ten (10) individuals.

JJW/aa
12/17/2024

Emission Detail Sheets

9Wood - 209600								
Emission Detail Sheets								
Facility Emissions Summary								
Criteria Pollutant Emissions								
Emission Unit	PM (TPY)	PM10 (TPY)	PM2.5 (TPY)	CO (TPY)	NOx (TPY)	SO2 (TPY)	VOC (TPY)	GHGs (TPY)
Significant	0	0	0	0	0	0	135	0
AIA	0.63	0.63	0.63	0	0	0	0	0
CIA	1.6E-02	1.6E-02	1.6E-02	0.52	0.62	1.1E-02	0.03	749
Total =	de minimis	de minimis	de minimis	de minimis	de minimis	de minimis	135	de minimis
FHAP/TAC Emissions								
Pollutant	CAS Number	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic				
Organics								
Acetaldehyde	75-07-0	1.9E-05	Yes	Yes				
Acetone	67-64-1	17.9	No	Yes				
Acrolein	107-02-8	1.7E-05	Yes	Yes				
Benzene	71-43-2	3.6E-05	Yes	Yes				
n-Butyl Alcohol	71-36-3	4.09	No	Yes				
Diethylene Glycol Butyl Ether	112-34-5	3.6E-03	Yes	Yes				
Ethyl Benzene	100-41-4	0.25	Yes	Yes				
Ethylene Glycol Butyl Ether	111-76-2	0.06	No	Yes				
Formaldehyde	50-00-0	0.28	Yes	Yes				
Hexamethylene Diisocyanate	822-06-0	8.3E-03	Yes	Yes				
Hexane	100-54-3	2.9E-05	Yes	Yes				
Methanol	67-56-1	1.8E-01	Yes	Yes				
Methyl Ethyl Ketone	78-93-3	2.46	No	Yes				
Naphthalene	91-20-3	1.9E-06	Yes	Yes				
POM (inc. PAHs)	--	2.5E-06	Yes	Yes				
iso-Propyl Alcohol	67-63-0	18.29	No	Yes				
Propylene	115-07-1	3.3E-03	No	Yes				
Propylene Glycol Methyl Ether Acetate	108-65-6	6.14	No	Yes				
Toluene	108-88-3	3.1E-01	Yes	Yes				
Xylenes	1330-20-7	1.23	Yes	Yes				
Inorganic Gases								
Ammonia	7664-41-7	2.0E-02	No	Yes				
Metals								
Arsenic	7440-38-2	1.2E-06	Yes	Yes				
Beryllium	7440-41-7	7.5E-08	Yes	Yes				
Cadmium	7440-43-9	6.9E-06	Yes	Yes				
Chromium, Hexavalent	18540-29-9	8.7E-04	Yes	Yes				
Cobalt	7440-48-4	5.9E-04	Yes	Yes				
Manganese	7439-96-5	2.4E-06	Yes	Yes				
Mercury	7439-97-6	1.6E-06	Yes	Yes				
Nickel	7440-02-0	1.3E-05	Yes	Yes				
Selenium	7782-49-2	1.5E-07	Yes	Yes				
Total Emissions (TPY) =		51.2	2.26	51.2				
Max Individual FHAP (TPY) =		1.23						
Note:								
Regulated pollutants emitted by CIA emission units do not contribute to the PSEL.								
All pollutants other than VOC are no more than the de minimis level in LRAPA title 12.								

9Wood - 209600		
Emission Detail Sheets		
VOC and HAP/TAC Emissions		
Spray Booth	Estimated Actual Hours	Potential Annual Hours
SB-4	265	1,752
SB-3	2,872	8,760
SB-2	265	1,752
SB-1	265	1,752

Manufacturer	Product Type	Product Code	Gallons Used	Coating (lb/gal)	VOC (lb/gal)	VOC (% wt.)	Actual VOC Emissions (lbs/yr)	Potential VOC Emissions (lbs/yr)
Rodda	Dye Stain Base	7998555	5755	6.77	0.78	11.55%	4,500	17,201
Cloverdale	Premium Precat White 275 20 Sheen	95478120	442	8.83	4.44	50.28%	1,962	7,501
Sherwin Williams	Black Maxitoner Pigment	6500-90203	32	9.25	3.85	41.62%	123	471
Sherwin Williams	White Maxitoner Pigment	AC0001493	3	9.25	3.85	41.62%	12	44
Sherwin Williams	HAPS Free Reducer	R7K305	5725	6.52	5.86	89.88%	33,549	128,222
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	10	6.52	5.92	90.80%	59	226
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	22	8.92	5.70	63.90%	125	479
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	1	8.54	6.61	77.40%	3	13
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	10	9.00	2.88	32.00%	30	113
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	25	8.80	5.45	61.93%	138	526
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	12	8.96	5.96	66.52%	72	273
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	85	11.81	6.01	50.89%	511	1,952
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	5	8.51	0.57	6.70%	3	11
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	5	8.49	0.82	9.66%	4	16
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	2321	7.84	5.41	69.01%	12,557	47,991
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CWX19808	755	7.84	5.41	69.01%	4,085	15,611
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	23776	7.82	5.46	69.82%	129,817	496,159
Sherwin Williams	Polane Catalyst	V66V29	285	8.78	2.19	24.94%	624	2,385
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XXC20277-7383	2309	8.09	5.57	68.85%	12,861	49,155
Total VOC Emissions (TPY) =							101	384

Unlimited Potential HAP/TAC Emissions

			Federal Hazardous Air Pollutants														Oregon Toxic Air Contaminants													
Manufacturer	Product Type	Product Code	Diethylene Glycol Butyl Ether (112-34-5)		Ethylbenzene (100-41-4)		Formaldehyde (50-00-0)		Hexamethylene Diisocyanate (822-06-0)		Methanol (67-56-1)		Toluene (108-88-3)		Xylene (1330-20-7)		Acetone (67-64-1)		n-Butyl Alcohol (71-36-3)		Ethylene Glycol Butyl Ether (111-76-2)		Methyl Ethyl Ketone (78-93-3)		iso-Propyl Alcohol (67-63-0)		Propylene Glycol Methyl Ether Acetate (108-65-6)			
			% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr		
Rodda	Dye Stain Base	7998555	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	95.00%	16,340	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Cloverdale	Premium Precat White 275 20 Sheen	95478120	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	4.74%	355	5.62%	422	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Black Maxitoner Pigment	6500-90203	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	White Maxitoner Pigment	AC0001493	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	HAPS Free Reducer	R7K305	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	14.28%	18,284	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	14.73%	18,887	0.00%	0.00
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	5.00%	11.31	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	57.00%	7.20	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	0.00%	0.00	0.20%	0.55	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.00%	2.73	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	0.00%	0.00	0.10%	1.95	0.00%	0.00	0.00%	0.00	0.00%	0.00	10.00%	195	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	0.00%	0.00	0.00%	0.00	0.10%	47.99	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	700.67	0.00%	0.00	0.00%	0.00	0.00%	0.00	3.16%	1,516.52	0.00%	0.00
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CWX19808	0.00%	0.00	0.00%	0.00	0.10%	15.61	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	227.92	0.00%	0.00	0.00%	0.00	0.00%	0.00	3.16%	493.31	0.00%	0.00
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	0.00%	0.00	0.00%	0.00	0.10%	496.16	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	7,244	0.00%	0.00	0.00%	0.00	0.00%	0.00	3.16%	15,679	0.00%	0.00
Sherwin Williams	Polane Catalyst	V66V29	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.70%	16.70	0.00%	0.00	0.00%	0.00	0.00%	0.00	50.00%	1,193	0.00%	0.00	5.00%	119	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XXC20277-7383	0.00%	0.00	1.00%	492	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	5.00%	2,458	0.00%	0.00	0.00%	0.00	0.00%	0.00	10.00%	4,915.51	0.00%	0.00	25.00%	12,288.78	0.00%	0.00
TPY =			3.6E-03	TPY =	0.25	TPY =	2.8E-01	TPY =	8.3E-03	TPY =	0.18	TPY =	0.31	TPY =	1.23	TPY =	17.9	TPY =	4.09	TPY =	6.0E-02	TPY =	2.46	TPY =	18.29	TPY =	6.14			

Note:
 Potential emissions are based on the following assumptions:
 - SB-3 is the production line. SB-4 is the samples and R&D line. SB-1 and SB-2 are used for touch-up and odd shapes.
 - SB-3 has operated for an average of 239.3 hours per month since installation.
 - SB-4 has operated for an average of 22.1 hours per month since installation.
 - SB-1 and SB-2 are assumed to operate for a similar number of hours as SB-4.
 - Potential emissions for SB-3 are based on 8760 hours of operation.
 - Potential emissions for SB-1, SB-2, and SB-3 are each based on 1752 hours of operation (20% of 8760 hours).
 Actual emissions are based on the period June 2022 through May 2023.

9Wood - 209600					
Emission Detail Sheets					
CIA - Natural Gas Combustion					
Combustion Specifications					
Max Heat Input	1.46	MMBtu/hr			
Heat Value - Natural Gas	1026	MMBtu/MMCF			
Max Hrs Operation	8760	hr/yr			
	NG Emission Factor (lb/MMCF)	NG Emission Factor Units	Potential Emissions (TPY)		
Criteria Pollutants					
PM ₁₀ /PM _{2.5}	2.5	lbs/MMCF	0.02		
Carbon Monoxide	84	lbs/MMCF	0.52		
Nitrogen Oxides	100	lbs/MMCF	0.62		
Sulfur Dioxide	1.7	lbs/MMCF	1.1E-02		
VOCs	5.5	lbs/MMCF	0.03		
GHGs (CO ₂ equiv.)	117	lbs/MMBtu	749		
	CAS Number	NG Emission Factor (lb/MMCF)	Potential Emissions (TPY)	Federal HAP	CAO Air Toxic
FHAP/TAC Emissions					
Organics					
Acetaldehyde	75-07-0	0.0031	1.9E-05	Yes	Yes
Acrolein	67-64-1	0.0027	1.7E-05	Yes	Yes
Benzene	107-02-8	0.0058	3.6E-05	Yes	Yes
Ethyl Benzene	100-41-4	0.0069	4.3E-05	Yes	Yes
Formaldehyde	50-00-0	0.0123	7.7E-05	Yes	Yes
Hexane	100-54-3	0.0046	2.9E-05	Yes	Yes
Naphthalene	91-20-3	0.0003	1.9E-06	Yes	Yes
POM (inc. PAHs)		0.0004	2.5E-06	Yes	Yes
Propylene	115-07-1	0.5300	3.3E-03	No	Yes
Toluene	108-88-3	0.0265	1.7E-04	Yes	Yes
Xylenes	1330-20-7	0.0197	1.2E-04	Yes	Yes
Inorganic Gases					
Ammonia	7664-41-7	3.2000	2.0E-02	No	Yes
Metals					
Arsenic	7440-38-2	2.0E-04	1.2E-06	Yes	Yes
Beryllium	7440-41-7	1.2E-05	7.5E-08	Yes	Yes
Cadmium	7440-43-9	1.1E-03	6.9E-06	Yes	Yes
Chromium, Hexavalent	18540-29-9	1.4E-03	8.7E-06	Yes	Yes
Manganese	7439-96-5	3.8E-04	2.4E-06	Yes	Yes
Mercury	7439-97-6	2.6E-04	1.6E-06	Yes	Yes
Nickel	7440-02-0	2.1E-03	1.3E-05	Yes	Yes
Selenium	7782-49-2	2.4E-05	1.5E-07	Yes	Yes
		Total Emissions =	2.4E-02	5.5E-04	2.4E-02
GHG-Related Emission Factors					
	Pollutant	Natural Gas (kg/MMBtu)	GWP		
	Carbon Dioxide (CO ₂)	53.06	1		
	Methane (CH ₄)	1.0E-03	25		
	Nitrous Oxide (N ₂ O)	1.0E-04	298		
Notes:					
Combustion units include two natural gas only boilers for SB-3 with a maximum heat input rating of 1.26 MMBtu per hour each.					
Combustion units include two natural gas only boilers for the wood drying unit with a maximum heat input rating of 0.2 MMBtu per hour each. Both sets of combustion units are redundant. The calculation assumes only one combustion unit operating at a time.					
PM ₁₀ /PM _{2.5} , SO ₂ , NOx, CO and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011).					
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2.					
Toxics emission factors, except for metals and ammonia, are based on Ventura County APCD "AB 2588 Combustion Emission Factors".					
Toxics emission factors for metals are based on US EPA AP-42 Section 1.4 - Natural Gas Combustion (07/1998).					
Ammonia emission factor is based on US EPA WebFire SCC 1-002-006-02 for an uncontrolled boiler.					
Chromium assumed to be hexavalent.					

9Wood - 209600			
Emission Detail Sheets			
AIA			
Woodworking Operations (AIA-WO)			
60 = Actual tons of sawdust disposed (2023)			
4,680 = Actual hours of operation per year (2023)			
8,760 = Max hours of operation per year			
50.0% = Estimated percentage of material considered PM			
99.9% = Baghouse control efficiency			
Criteria	Potential	Potential	PM/PM₁₀/PM_{2.5}
Pollutants	Sawdust (TPY)	PM (TPY)	PTE (TPY)
PM/PM ₁₀ /PM _{2.5}	112	56	0.06
Notes:			
PM ₁₀ and PM _{2.5} emissions are assumed to equal PM emissions after control by the baghouse.			
Estimated percentage of material considered PM represents the amount of material collected that would be considered available to be emitted to atmosphere.			
Baghouse control efficiency is based on the application materials.			

9Wood - 209600	
Emission Detail Sheets	
AIA - Overspray	
65%	= Minimum Coating Transfer Efficiency
98.80%	= Minimum Filter PM Removal Efficiency

PM/PM10/PM2.5 Emissions									
Manufacturer	Product Type	Product # (MSDS)	Gallons Used	Coating Wt./Gal.	Solids (% wt)	Solids Usage (lbs/yr)	Actual PM Emissions (lbs/yr)	Uncontrolled Potential PM Emissions (lbs/yr)	Potential PM Emissions (lbs/yr)
Rodda	Dye Stain Base	7998555	5755	6.77	0.00%	0.00	0.0	0.0	0.0
Cloverdale	Premium Precat White 275 20 Sheen	95478120	442	8.83	42.00%	1,639.20	6.9	2,192.8	26.3
Sherwin Williams	Black Maxitoner Pigment	6500-80203	32	9.25	29.00%	85.84	0.4	114.8	1.4
Sherwin Williams	White Maxitoner Pigment	AC0001493	3	9.25	29.00%	8.05	0.0	10.8	0.1
Sherwin Williams	HAPS Free Reducer	R7K305	5725	6.52	0.00%	0.00	0.0	0.0	0.0
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	10	6.52	0.00%	0.00	0.0	0.0	0.0
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	22	8.92	40.00%	78.50	0.3	105.0	1.3
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	1	8.54	40.00%	1.71	0.0	2.3	0.0
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	10	9.00	40.00%	36.90	0.2	49.4	0.6
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	25	8.80	40.00%	88.88	0.4	118.9	1.4
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	12	8.96	64.00%	68.81	0.3	92.1	1.1
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	85	11.81	30.00%	301.16	1.3	402.9	4.8
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	5	8.51	45.00%	19.15	0.1	25.6	0.3
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	5	8.49	47.00%	19.95	0.1	26.7	0.3
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	2321	7.84	30.00%	5,458.99	22.9	7,302.5	87.6
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	755	7.84	30.00%	1,775.76	7.5	2,375.4	28.5
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	23776	7.82	30.00%	55,778.50	234.3	74,614.7	895.4
Sherwin Williams	Polane Catalyst	V66V29	285	8.78	75.00%	1,876.73	7.9	2,510.5	30.1
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XC20277-7383	2309	8.09	23.00%	4,296.36	18.0	5,747.2	69.0
Total PM Emissions (TPY) =							0.15	47.8	0.57

Unlimited Potential HAP/TAC Emissions						
Federal Hazardous Air Pollutants						
Manufacturer	Product Type	Product Code	Chromium (7440-47-3)		Cobalt (7440-48-4)	
			% wt.	lbs/yr	% wt.	lbs/yr
Rodda	Dye Stain Base	7998555	0.00%	0.0E+00	0.00%	0.0E+00
Cloverdale	Premium Precat White 275 20 Sheen	95478120	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Black Maxitoner Pigment	6500-80203	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	White Maxitoner Pigment	AC0001493	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	HAPS Free Reducer	R7K305	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	1.33%	1.4E+00	0.00%	0.0E+00
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	0.65%	3.2E-01	0.00%	0.0E+00
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	0.00%	0.0E+00	1.00%	1.2E+00
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Polane Catalyst	V66V29	0.00%	0.0E+00	0.00%	0.0E+00
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XC20277-7383	0.00%	0.0E+00	0.00%	0.0E+00
			TPY =	8.6E-04	TPY =	5.9E-04

Note:
 Uses the same production assumptions as VOC emissions to determine potential.
 PM emissions represents PM / PM10 / PM2.5 emissions.
 Chromium assumed to be hexavalent.
 All lines assumed to achieve 65% transfer efficiency. SB-3 and SB-4 are probably achieving closer to 90% transfer efficiency.



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

1010 Main Street
Springfield, OR 97477

9Wood, Inc.
999 South A Street
Springfield, Oregon 97477
Website: <http://9wood.com/>

Permit No. 209600

Source Information:

Primary SIC	2541
Secondary SIC	--
Primary NAICS	337212
Secondary NAICS	--

Source Category (LRAPA Title 37, Table 1)	Part B: 69. Surface coating operations: coating operations whose actual or expected usage of coating materials is greater than 250 gallons per month. Part C: 4. All sources that request a PSEL equal to or greater than the SER for a regulated pollutant.
Public Notice Category	III

Compliance and Emissions Monitoring Requirements:

Unassigned emissions	NA
Emission credits	NA
Compliance schedule	NA
Source test date(s)	NA

COMS	NA
CEMS	NA
Ambient monitoring	NA

Reporting Requirements

Annual report (due date)	March 1
Semi-Annual Report (due date)	March 1
	September 1
Greenhouse Gas (due date)	NA

Monthly report (due dates)	NA
Quarterly report (due dates)	NA
Excess emissions report	Immediately
Other reports	NA

Air Programs

NSPS (list subparts)	NA
NESHAP (list subparts)	NA
CAM	NA
Regional Haze (RH)	NA
Synthetic Minor (SM)	NA
SM-80	NA
Part 68 Risk Management	NA
Title V	Y
Major FHAP source	NA
Federal major source	NA

New Source Review (NSR)	NA
Prevention of Significant Deterioration (PSD)	NA
Acid Rain	NA
Clean Air Mercury Rule (CAMR)	NA
TACT	NA
>20 Megawatt	NA
Cleaner Air Oregon (CAO)	NA

TABLE OF CONTENTS

LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT 3

INTRODUCTION 4

FACILITY DESCRIPTION 4

GENERAL BACKGROUND INFORMATION 4

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION 5

AGGREGATE INSIGNIFICANT ACTIVITIES 5

TITLE V PERMIT CHANGE LOG 6

CATEGORICALLY INSIGNIFICANT ACTIVITIES 6

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING 7

EMISSION LIMITS FOR INSIGNIFICANT ACTIVITIES 9

FEDERAL REQUIREMENTS 9

PLANT SITE EMISSION LIMIT (PSEL) INFORMATION 11

UNASSIGNED EMISSIONS AND EMISSION REDUCTION CREDITS 11

SIGNIFICANT EMISSION RATE 12

HAZARDOUS AIR POLLUTANTS (HAPS) 12

GENERAL TESTING REQUIREMENTS 14

SOURCE TEST RESULTS 14

RECORDKEEPING REQUIREMENTS 14

REPORTING REQUIREMENTS 14

COMPLIANCE HISTORY 14

PUBLIC NOTICE 15

EPA REVIEW 15

EMISSIONS DETAIL SHEETS 15

LIST OF ABBREVIATIONS THAT MAY BE USED IN THIS REVIEW REPORT

ACDP	Air Contaminant Discharge Permit	NO _x	Nitrogen oxides
AQMA	Air Quality Management Area	NSPS	New Source Performance Standards
Act	Federal Clean Air Act	NSR	New Source Review
ASTM	American Society of Testing and Materials	O ₂	Oxygen
Btu	British thermal unit	OAR	Oregon Administrative Rules
CAM	Compliance Assurance Monitoring	ODEQ	Oregon Department of Environmental Quality
CAO	Cleaner Air Oregon	ORS	Oregon Revised Statutes
CEMS	Continuous Emissions Monitoring System	O&M	Operation and maintenance
CFR	Code of Federal Regulations	Pb	Lead
CI	Compression Ignition	PCD	Pollution Control Device
CMS	Continuous Monitoring System	PM	Particulate matter
CO	Carbon Monoxide	PM _{2.5}	Particulate matter less than 2.5 microns in size
CO ₂	Carbon dioxide	PM ₁₀	Particulate matter less than 10 microns in size
CO _{2e}	Carbon dioxide equivalent	ppm	Parts per million
COMS	Continuous Opacity Monitoring System	PSEL	Plant Site Emission Limit
CPDS	Certified Product Data Sheet	psia	pounds per square inch, actual
CPMS	Continuous parameter monitoring system	PTE	Potential to Emit
DEQ	Department of Environmental Quality	RATA	Relative Accuracy Testing Audit
dscf	Dry standard cubic feet	RICE	Reciprocating Internal Combustion Engine
EF	Emission factor	SACC	Semi-Annual Compliance Certification
EPA	US Environmental Protection Agency	SCEMP	Surrogate Compliance Emissions Monitoring Parameter
EU	Emissions Unit	Scf	Standard cubic foot
FCAA	Federal Clean Air Act	SER	Significant emission rate
FHAP	Federal Hazardous Air Pollutant as defined by LRAPA title 12	SERP	Source emissions reduction plan
ft ²	Square foot	SI	Spark Ignition
FSA	Fuel sampling and analysis	SIC	Standard Industrial Code
GHG	Greenhouse Gas	SIP	State Implementation Plan
gr/dscf	Grain per dry standard cubic feet (1 pound = 7000 grains)	SO ₂	Sulfur dioxide
HCFC	Halogenated Chlorofluorocarbons	ST	Source test
ID	Identification number or label	TAC	Toxic air contaminant as defined by OAR 340-245-0020(56)
I&M	Inspection and maintenance	TACT	Typically Achievable Control Technology
LAER	Lowest Achievable Emission Rate	TPY	Tons per year
LRAPA	Lane Regional Air Protection Agency	VE	Visible emissions
MACT	Maximum Achievable Control Technology	VMT	Vehicle miles traveled
MM	Million	VOC	Volatile organic compounds
MMBtu	Million British thermal units	VHAP	Volatile hazardous air pollutant
MW	Megawatts	Year	A period consisting of any 12 consecutive calendar months
NA	Not applicable		
NESHAP	National Emission Standards for Hazardous Air Pollutants		

INTRODUCTION

1. 9Wood, Inc., (“9Wood” or “the facility”) is an existing facility applying for an initial Title V federal operating permit. Upon issuance, the initial Title V federal operating permit will be valid for 5 years.
 - 1.a. Information relied upon: The initial permit is based upon applications (Nos. 69691 and 69728) received June 21, 2023 and July 19, 2023.
2. In accordance with OAR 340-218-0120(1)(f), 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.

FACILITY DESCRIPTION

3. The facility uses four (4) spray paint booths known as SB-1 through SB-4 for spray painting suspended wood ceiling components. The facility was built in August of 2005. The manual spray booth SB-1 was installed in August of 2005. The samples spray booth SB-2 was installed in December of 2014. The automated spray booth line SB-3 was installed in May of 2018. The R&D automated spray booth line SB-4 was installed in July of 2021.
4. The facility is located in an area that is generally flat. To the north of the facility there is a commercial area with scattered residential housing. To the east of the facility is a mixed commercial and industrial area. To the south of the facility there is a rail line and green space. To the west of the facility is a commercial area and a former rail yard.

GENERAL BACKGROUND INFORMATION

5. 9Wood is a Title V major source because potential emissions of VOC exceed 100 tons per year. The facility is not a federal major source for PSD purposes because the potential emissions of any individual regulated pollutant, excluding GHGs, are less than 250 tons per year and the facility is not in a listed source category. In addition, 9Wood is a synthetic minor source of federal HAPs.
6. The facility is located inside the Eugene-Springfield Air Quality Management Area. The facility is located in an area that has been designated attainment/unclassified for PM_{2.5}, ozone (VOC), NO₂, SO₂, and Pb and a maintenance area for CO and PM₁₀. The facility is located within 100 kilometers of two (2) Class I air quality protection areas: Diamond Peak Wilderness and Three Sisters Wilderness area.
7. LRAPA has reviewed and issued the following permitting actions to this facility:

Date Approved	Permit Action Type	Description
10/03/2010	Simple ACDP	Initial Permit
08/27/2014	NC-209600-A14	Installation of an open face samples spray booth (SB-2)
10/27/2014	Addendum No. 1	Incorporation of NC-209600-A14
03/21/2016	Simple ACDP	Renewal
05/28/2019	Standard ACDP	Initial permit including first automated spray booth (SB-3)
12/18/2020	NC-209600-A20	Installation of R&D automated spray booth (SB-4)
01/25/2021	Addendum No. 1	Incorporation of NC-209600-A20

Date Approved	Permit Action Type	Description
06/22/2022	Addendum No. 2	Increase the PSEL for VOCs from 99 TPY to 135 TPY.
01/01/2024	Title V Operating Permit	Initial Title V Operating Permit

EMISSIONS UNIT AND POLLUTION CONTROL DEVICE IDENTIFICATION

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

EU ID	Emission Unit Description	PCD ID	Pollution Control Device Description	Date Constructed / Last Modified
SB-1	Manual Spray Booth	DF-1	Dry Filters	2005
SB-2	Samples Spray Booth	DF-2	Dry Filters	2014
SB-3	Automated Spray Booth Line	DF-3	Dry Filters	2018
SB-4	R&D Automated Spray Booth Line	DF-4	Dry Filters	2021

9. Manual Spray Booth (EU: SB-1): Spray booth SB-1 is a manual spray booth using one (1) air assisted airless spray gun. Spray booth SB-1 is used for touch-up and odd shapes. Any touch-up or production activities from this booth are air dried. Overspray from spray booth SB-1 is controlled by dry filters.
10. Samples Spray Booth (EU: SB-2): Spray booth SB-2 is a manual spray booth using one (1) air assisted airless spray gun. Spray booth SB-2 is used for touch-up and odd shapes. Any touch-up or production activities from this booth are air dried. Overspray from spray booth SB-2 is controlled by dry filters.
11. Automated Spray Booth Line (EU: SB-3): Spray booth SB-3 is an automated spray booth line equipped with eight (8) paint spray heads, although only four (4) heads are operational at any one time. This line is the primary production line for the facility, and it coats flat sections of wood components. The spray heads use air assisted airless spray application technology. Overspray from spray booth SB-3 is controlled by dry filters. Spray booth SB-3 uses hot water heat supplied by two (2) natural gas-fired boilers each with a maximum heat input rating of 1.26 MMBtu per hour to dry the coating at three different locations on the automated spray line. The boilers are redundant and only one boiler is operational at a time. The two (2) boilers are considered Categorically Insignificant Activities under LRAPA title 12.
12. R&D Automated Spray Booth Line (EU: SB-4): Spray booth SB-4 is an automated spray booth line equipped with eight (8) paint spray heads, although only four (4) heads are operational at any one time. The spray heads use air assisted airless spray application technology. Unlike spray booth SB-3, spray booth SB-4 is used for research & development and to smooth the transition from sampling to production. As such, automated spray booth line SB-4 is not equipped with outboard dryers or a production conveyance system. Overspray from spray booth SB-4 is controlled by dry filters.

AGGREGATE INSIGNIFICANT ACTIVITIES

13. Woodworking Operations (AIA-WO): 9Wood accepts already cut to size and larger sized kiln-dried lumber. The larger sized kiln-dried lumber is cut to size onsite. The wood cutting equipment includes one beam saw equipped with a bag filter, one edge banner equipped with a bag filter, and several table saws and sanders. All the dust collection systems are located inside. The wood is collected internally in a garbage can then manually dumped outside in a covered dumpster. This area and/or equipment does not vent outside. While LRAPA has not estimated emissions of particulate matter from these processes, it is expected to be significantly less than one (1) ton per year because the emissions are exhausted indoors. As such, the emissions from this aggregate insignificant activity and any applicable categorically insignificant activities are also considered de minimis as defined in Title 12 for particulate matter emissions. No PSELs for particulate matter emissions will be included in the permit as allowed under LRAPA 42-0020(3)(a). The

facility also dips the lumber into a fire-retardant solution that air dries prior to coating the wood components. The fire retardant solution has no VOC or HAPs.

TITLE V PERMIT CHANGE LOG

14. As this is an initial Title V permit, a log listing condition-by-condition changes between a previous Title V permit and the proposed Title V permit is not applicable.

CATEGORICALLY INSIGNIFICANT ACTIVITIES

15. The facility has the following categorically insignificant activities:
- Constituents of a chemical mixture present at less than 1 percent 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 percent by weight of any carcinogen listed in the U.S. Department of Health and Human Service's Annual Report on Carcinogens when usage of the chemical mixture is less than 100,000 pounds/year;
 - Evaporative and tail pipe emissions from on-site motor vehicle operation;
 - Distillate oil, gasoline, natural gas, or propane burning equipment, provided the aggregate expected actual emissions of the equipment identified as categorically insignificant do not exceed the de minimis level for any regulated pollutant, based on the expected maximum annual operation of the equipment. If a source's expected emissions from all such equipment exceed the de minimis levels, then the source may identify a subgroup of such equipment as categorically insignificant with the remainder not categorically insignificant. The following equipment may never be included as categorically insignificant:
 - Any individual distillate oil, kerosene or gasoline burning equipment with a rating greater than 0.4 million Btu/hour;
 - Any individual natural gas or propane burning equipment with a rating greater than 2.0 million Btu/hour.
 - 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;
 - On-site recreation facilities;
 - 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;
 - 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;
 - Air vents from air compressors;
 - Air purification systems;
 - Electrical charging station;
 - Instrument air dryers and distribution;

- Fire suppression;
- 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;
- Natural gas, propane, and liquefied petroleum gas (LPG) storage tanks and transfer equipment;
- Emissions from wastewater discharges to publicly owned treatment works (POTW) provided the source is authorized to discharge to the POTW, not including on-site wastewater treatment and/or holding facilities;
- Fire suppression and training;
- Paved roads and paved parking lots within an urban growth boundary;
- Health, safety, and emergency response activities;
- Non-contact steam vents and leaks and safety and relief valves for boiler steam distribution systems; and
- Combustion source flame safety purging on startup.

EMISSION LIMITS AND STANDARDS, TESTING, MONITORING, AND RECORDKEEPING

16. 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 facility'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.
17. 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 the processes and pollution control devices. It is assumed that as long as these processes and controls are properly operated, the emissions levels will be below the emissions limits specified in the permit.

Facility-Wide General Emission Limits and Standards

18. For facilities with the potential for fugitive emissions, the draft permit would not allow or permit any materials to be handled, transported, or stored; or a building, its appurtenances; or a road to be used, constructed, altered, repaired or demolished; or any equipment to be operated, without taking reasonable precautions to prevent particulate matter from becoming airborne as required under LRAPA 48-015(1). This facility does not have any significant fugitive emission sources at this time. If this changes in the future, the permit will be revised to include this requirement and appropriate compliance demonstration.
19. The facility is subject to the nuisance regulations under LRAPA 49-010(1). Compliance will be demonstrated through the maintenance of a complaint log as described in the draft permit.

20. The facility is subject to the limitations under LRAPA 32-055 that prohibit the emission of any particulate matter larger than 250 microns in size at such duration and quantity as to create an observable deposition upon the real property of another person. Compliance will be demonstrated through the maintenance of a complaint log as described in the draft permit.
21. The facility is subject to a limitation such that the permittee must not discharge from any source whatsoever such quantities of air contaminants which cause injury or damage to any persons, the public, business or property as determined by LRAPA. Compliance will be demonstrated through the maintenance of a complaint log as described in the draft permit.
22. In the event that an Air Pollution Alert, Warning, or Emergency Episode is declared in the Eugene-Springfield area by LRAPA, the permittee must take the action appropriate to the episode condition as required by LRAPA 51-015. The draft permit contains the appropriate actions for each response level.
23. The draft permit will contain generic language related to the accidental release prevention regulations under 40 CFR Part 68. The permittee must submit a risk management plan (RMP) by the date specified in 40 CFR 68.10, and comply with the plan and all other applicable Part 68 requirements, if the facility becomes subject to this regulation.

Emission Unit Specific Emission Limits and Standards

24. Spray booth lines SB-1 through SB-4 are subject to the visible emission limitations under LRAPA 32-010(3). For sources, other than wood-fired boilers, no person may emit or allow to be emitted any visible emissions that equal or exceed an average of 20 percent opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. Compliance will be demonstrated through the use of operational and work practice requirements, and a plant survey of visible emissions to be completed at least once a quarter.
25. Spray booth lines SB-1 and SB-2 are subject to the following particulate matter emission limitations under LRAPA 32-015(2)(b)(B): For sources installed, constructed, or modified on or after June 1, 1970 but prior to April 16, 2015 for which there are not representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance will be demonstrated through the use of operational and work practice requirements, and a plant survey of visible emissions to be completed at least once a quarter.
26. Spray booth lines SB-3 and SB-4 are subject to the following particulate matter emission limitations under LRAPA 32-015(2)(c): For sources installed, constructed, or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance will be demonstrated through the use of operational and work practice requirements, and a plant survey of visible emissions to be completed at least once a quarter.
27. The spray booth lines SB-1 through SB-4 are subject to the process weight rate emission limitation under LRAPA 32-045. Particulate matter emissions in any one hour may not exceed the amount shown in LRAPA 32-8010 for the process weight allocated to each source. Compliance will be demonstrated through the use of operational and work practice requirements, and a plant survey of visible emissions to be completed at least once a quarter.

Typically Achievable Control Technology (TACT)

28. LRAPA 32-008(1) requires an existing unit a facility to meet TACT if the emission unit meets the following criteria: The emission unit is not already subject to emission standards for the regulated pollutant under LRAPA title 30, title 32, title 33, title 38, title 39 or title 46 at the time TACT is required; the source is required to have a permit; the emission unit has emissions of criteria pollutants equal to or greater than five (5) tons per year of particulate or ten (10) tons per year of any gaseous pollutant; and LRAPA determines that air pollution control devices and emission reduction processes in use for the emissions do not represent

- TACT and that further emission control is necessary to address documented nuisance conditions, address an increase in emissions, ensure that the source is in compliance with other applicable requirements, or to protect public health or welfare or the environment.
29. LRAPA 32-008(2) requires new or modified emission units to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or Type A State NSR in LRAPA title 38, and applicable NSPS in LRAPA title 46, or any other standard applicable to only new or modified sources in LRAPA title 32, title 33, or title 39 for the regulated pollutant; the source is required to have a permit; if new, the emission unit has emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; if modified, the emission unit would have an increase in emissions of any criteria pollutant equal to or greater than one (1) ton per year of any criteria pollutant; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT.
30. Each of the spray booth lines is expected to have VOC emissions greater than one (1) ton per year for a new source or 10 tons per year for an existing source. While LRAPA has not performed a formal TACT determination for VOCs, LRAPA has determined that (1) the use of air assisted airless (AAA) spray guns (or equivalent), (2) the use of dry filters with a control efficiency of at least 98.8% for particulate matter as determined by the manufacturer, (3) manual spray gun system cleaning is not performed outside a container that collects the gun cleaning solvent, and (4) personnel who apply surface coatings are trained in proper spray application of surface coatings likely meets TACT. Based on vendor literature, AAA spray guns typically achieve a transfer efficiency of between 65-85%. The facility's use of AAA spray guns (or equivalent) results in the application of the least amount of VOC per square foot of product produced for their particular application.

EMISSION LIMITS FOR INSIGNIFICANT ACTIVITIES

31. As identified earlier in this Review Report, this facility has insignificant emissions units (IEUs) that include categorically insignificant activities, as defined in LRAPA title 12 and/or OAR 340-200-0020. For the most part, the standards that apply to IEUs are for opacity and particulate matter. 40 CFR 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 facility'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 includes limited requirements for categorically insignificant activities.

FEDERAL REQUIREMENTS

Chemical Accident Prevention Provisions

32. The Title V permit includes standard language related to 40 CFR Part 68 – Chemical Accident Prevention Provisions. Should the material storage rate at this facility subject this facility to 40 CFR Part 68, the facility must satisfy all the applicable risk management requirements, including the development of a risk management plan.

Stratospheric Ozone-Depleting Substances

33. 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, 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.

New Source Performance Standards

34. The facility is not currently subject to any New Source Performance Standards under 40 CFR Part 60.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

35. The facility is not currently subject to any National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 61 or 40 CFR Part 63.
36. The following NESHAP were evaluated and determined to not be applicable to this source:
- 36.a. The facility is not subject to 40 CFR 63 subpart JJ – National Emission Standards for Wood Furniture Manufacturing Operations because the facility is an area source of federal HAPs.
 - 36.b. The facility is not subject to 40 CFR 63 subpart QQQQ – National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products because the facility is an area source of federal HAPs.
 - 36.c. The facility is not subject to 40 CFR 63 subpart HHHHHH ('6H') – National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources because the facility does not perform paint stripping operations or apply coatings to metal or plastic products.

Compliance Assurance Monitoring (CAM)

37. The facility is not subject to the provisions of 40 CFR Part 64 – Compliance Assurance Monitoring (CAM) because it does not have any control equipment, emission limitations or pre-control emissions at or above Title V major source levels for any one (1) pollutant-specific emission unit. The following table evaluates CAM applicability for all emission units:

Emission Unit	Uses a Control Device for a Regulated Pollutant	Pollutant	Uncontrolled Potential Emissions Exceed Major Source Threshold	Emission Limitation or Standard Applies for this Pollutant	Subject to CAM for the Pollutant
SB-1	Yes	PM / PM ₁₀ / PM _{2.5}	No	Yes	No
SB-1	No	VOC	Yes	No	No
SB-1	No	HAP	No	No	No
SB-2	Yes	PM / PM ₁₀ / PM _{2.5}	No	Yes	No
SB-2	No	VOC	Yes	No	No
SB-2	No	HAP	No	No	No
SB-3	Yes	PM / PM ₁₀ / PM _{2.5}	No	Yes	No
SB-3	No	VOC	Yes	No	No
SB-3	No	HAP	No	No	No
SB-4	Yes	PM / PM ₁₀ / PM _{2.5}	No	Yes	No
SB-4	No	VOC	Yes	No	No

Emission Unit	Uses a Control Device for a Regulated Pollutant	Pollutant	Uncontrolled Potential Emissions Exceed Major Source Threshold	Emission Limitation or Standard Applies for this Pollutant	Subject to CAM for the Pollutant
SB-4	No	HAP	No	No	No

PLANT SITE EMISSION LIMIT (PSEL) INFORMATION

38. Provided below is a summary of the baseline emission rate, netting basis, plant site emission limit and emissions capacity.

Pollutant	Baseline (tons/yr)	Netting Basis		Plant Site Emission Limit (PSEL)			PTE (tons/yr)
		Previous (tons/yr)	Proposed (tons/yr)	Previous PSEL (tons/yr)	Proposed PSEL (tons/yr)	PSEL Increase over the Netting Basis (tons/yr)	
PM	0	0	0	NA	NA	NA	0.59
PM ₁₀	0	0	0	NA	NA	NA	0.59
PM _{2.5}	NA	0	0	NA	NA	NA	0.59
CO	0	0	0	NA	NA	NA	0.52
NO _x	0	0	0	NA	NA	NA	0.62
SO ₂	0	0	0	NA	NA	NA	0.01
VOC	0	0	0	135	135	135	384
GHG	0	0	0	NA	NA	NA	749

- 38.a. The facility has no baseline emission rates for PM, PM₁₀, SO₂, NO_x, CO, and VOC because the facility was not in operation during the 1978 baseline year. A baseline emission rate is not established for PM_{2.5} in accordance with LRAPA 42-0048(3). The facility has no baseline for GHGs because the facility had no GHG emissions above de minimis during any consecutive 12 calendar month period during calendar years 2000 through 2010.
- 38.b. The netting basis for all pollutants is set at zero because the facility was constructed after the 1978 baseline year and the facility has not had any emission increases approved for any of the reasons listed under LRAPA 42-0046(3)(e).
- 38.c. No PSELs were established for PM, PM₁₀, PM_{2.5}, SO₂, CO, NO_x and GHGs because these pollutants will be emitted from the facility at no more than the de minimis emission levels listed in LRAPA title 12. The proposed VOC PSEL remains at 135 TPY as set in the Standard ACDP issued on June 22, 2022.
- 38.d. Detailed calculations for the proposed PSELs and facility PTE for all pollutants can be found in the emissions detail sheets of this Review Report.

UNASSIGNED EMISSIONS AND EMISSION REDUCTION CREDITS

39. The facility has no unassigned emissions as shown in the table below. Unassigned emissions are equal to the netting basis minus the source’s current PTE, minus any banked emission reduction credits. The facility has

zero (0) tons of emission reduction credits. In accordance with LRAPA 42-0055 the maximum unassigned emissions may not be more than the SER.

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	0	0.59	0	0	25
PM ₁₀	0	0.59	0	0	15
PM _{2.5}	0	0.59	0	0	10
CO	0	0.52	0	0	100
NO _x	0	0.62	0	0	40
SO ₂	0	0.01	0	0	40
VOC	0	384	0	0	40
GHG	0	749	0	0	75,000

SIGNIFICANT EMISSION RATE

40. The proposed PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 rules for all of the pollutants, except for VOCs, as shown below. For VOCs, there is no change in the PSEL that was reviewed and set in the Standard ACDP issued on June 22, 2022.

Pollutant	Netting Basis (tons/year)	Proposed PSEL (tons/year)	Increase from Netting Basis (tons/year)	SER (tons/year)
PM	0	0	0	25
PM ₁₀	0	0	0	15
PM _{2.5}	0	0	0	10
CO	0	0	0	100
NO _x	0	0	0	40
SO ₂	0	0	0	40
VOC	0	135	135	40
GHG	0	0	0	75,000

HAZARDOUS AIR POLLUTANTS (HAPS)

41. As discussed in the Emission Details section of this review report, potential federal HAP emissions are based on actual annual emissions for a given time period multiplied by a scaling factor based on the ratio of potential operational hours divided by actual operational hours. In addition, although the facility has requested a PSEL limit on VOCs of 135 TPY, the potential federal HAP emissions presented here have not been reduced proportionally. Potential federal HAP emissions are projected to be 2.26 tons per year, with xylenes having the highest individual federal HAP emissions at 1.23 tons per year. A major source of FHAPs is defined as having potential federal HAP emissions of at least 10 tons per year of any single federal HAP and 25 tons per year of the aggregate of all federal HAPs. This facility does not have potential federal HAP emissions exceeding these thresholds based on the constituents of the current coatings and the facility would normally be considered a minor source of federal HAPs. However, the facility has requested PSEL on federal HAPs be retained in the permit of nine (9) tons per year of any single federal HAP and 24 tons per year of the

aggregate of all federal HAPs to allow the facility flexibility in their use of coatings. As such, the facility will be considered a synthetic minor source of federal HAPs.

Under the Cleaner Air Oregon (CAO) program, only existing sources that have been notified by LRAPA and new sources are required to perform risk assessments. This source has not been notified by LRAPA and is therefore, not yet required to perform a risk assessment or report annual emissions of toxic air contaminants. LRAPA required reporting of approximately 600 toxic air contaminants in 2016 and 2020 and regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All hazardous air pollutants are on the list of approximately 600 toxic air contaminants. After the source is notified by LRAPA, they must update their inventory and perform a risk assessment to see if they must reduce risk from their toxic air contaminant emissions. Until then, sources will be required to report toxic air contaminant emissions triennially.

42. The table below represents the potential emissions of federal HAPs and CAO TACs from this facility assuming no elected limitations on PSEL.

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	1.9E-05	Yes	Yes
67-64-1	Acetone	17.9	No	Yes
107-02-8	Acrolein	1.7E-05	Yes	Yes
71-43-2	Benzene	3.6E-05	Yes	Yes
71-36-3	n-Butyl Alcohol	4.09	No	Yes
112-34-5	Diethylene Glycol Butyl Ether	3.6E-03	Yes	Yes
100-41-4	Ethyl Benzene	0.25	Yes	Yes
111-76-2	Ethylene Glycol Butyl Ether	0.06	No	Yes
50-00-0	Formaldehyde	0.28	Yes	Yes
822-06-0	Hexamethylene Diisocyanate	8.3E-03	Yes	Yes
100-54-3	Hexane	2.9E-05	Yes	Yes
67-56-1	Methanol	1.8E-01	Yes	Yes
78-93-3	Methyl Ethyl Ketone	2.46	No	Yes
91-20-3	Naphthalene	1.9E-06	Yes	Yes
--	POM (inc. PAHs)	2.5E-06	Yes	Yes
67-63-0	iso-Propyl Alcohol	18.29	No	Yes
115-07-1	Propylene	3.3E-03	No	Yes
108-65-6	Propylene Glycol Methyl Ether Acetate	6.14	No	Yes
108-88-3	Toluene	3.1E-01	Yes	Yes
1330-20-7	Xylenes	1.23	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	2.0E-02	No	Yes
Metals				
7440-38-2	Arsenic	1.2E-06	Yes	Yes
7440-41-7	Beryllium	7.5E-08	Yes	Yes
7440-43-9	Cadmium	6.9E-06	Yes	Yes
18540-29-9	Chromium, Hexavalent	8.7E-04	Yes	Yes
7440-48-4	Cobalt	5.9E-04	Yes	Yes
7439-96-5	Manganese	2.4E-06	Yes	Yes
7439-97-6	Mercury	1.6E-06	Yes	Yes

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
7440-02-0	Nickel	1.3E-05	Yes	Yes
7782-49-2	Selenium	1.5E-07	Yes	Yes
Total (TPY) =		51.2	2.26	51.2

GENERAL TESTING REQUIREMENTS

43. 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 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

44. The facility is not required to conduct performance testing. LRAPA is not aware of any performance testing conducted at this facility. Safety Data Sheets or Certified Product Data Sheets and the material usage are used to determine the facility's VOC and HAP emissions.

RECORDKEEPING REQUIREMENTS

45. 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. The records of all monitoring specified in the Title V permit must be kept at the plant site for at least five (5) years.

REPORTING REQUIREMENTS

46. 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.

COMPLIANCE HISTORY

47. LRAPA has issued the following violation notices and/or taken the following enforcement actions against this facility since the facility began operation:
- 47.a. An informational inspection was performed on January 23, 2019 to view automated spray coating line (SB-3). Based upon this visit, it was determined that automated spray coating line (SB-3) was installed without approval from LRAPA and that the facility VOC emissions exceeded the VOC PSEL of 39 tons per year in the Simple ACDP. As a result, LRAPA initiated enforcement action and the facility applied for a Standard ACDP as required under title 37. Notice of Non-Compliance (NON) 3751 was issued on February 6, 2019 for failing to notify LRAPA of the construction of automated spray coating line (SB-3), for not receiving the appropriate LRAPA approvals prior to the installation and operation of automated spray coating line (SB-3), and for exceeding the VOC PSEL of 39 tons per year. 9Wood

- was then issued Notice of Civil Penalty Assessment (NCP 19-3751) for \$3,800 on April 23, 2019. They paid the civil penalty amount of \$3,800 on May 1, 2019 and the case was closed.
- 47.b. During the full compliance evaluation performed on May 18, 2023, the facility was determined to not be in compliance with Conditions 9.c. and 15.c. of the Standard ACDP. These conditions require the facility to record visible emission monitoring of emission units SB-1, SB-2, SB-3, and SB-4. ADD MORE.
48. This facility is regularly inspected by LRAPA and occasionally by other regulatory agencies. The following table indicates the inspection history of this facility since the facility began operation:

Type of Inspection	Date	Results
LRAPA - Full Compliance Evaluation	02/12/2013	No areas of non-compliance discovered
LRAPA - Full Compliance Evaluation	05/18/2023	Not in compliance

PUBLIC NOTICE

49. The draft permit was on public notice from October 10, 2023 to November 13, 2023. No comments were submitted in writing during the public comment period.

EPA REVIEW

50. The proposed permit was sent to EPA on November 15, 2023 for a 45-day review period. Because no adverse comments were received and there were no substantive changes to the permit after the public comment period, LRAPA requested an EPA expedited review of the proposed permit. On November 16, 2023, EPA stated LRAPA may issue the final permit. The 45-day EPA review period ends on January 2, 2024.

If the EPA does not object in writing, any person may petition the EPA within 60 days after the expiration of EPA's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period provided for in OAR 340-218-0210, unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objection arose after such period.

EMISSIONS DETAIL SHEETS

51. Detailed emission calculations and supporting information are found in the following appendices:

Appendix A: PTE Emission Calculations

APPENDIX A: PTE Emission Calculations

9Wood - 209600							
Emission Detail Sheets							
Facility Unlimited Potential Emissions Summary							
Criteria Pollutant Emissions							
PM (TPY)	PM ₁₀ (TPY)	PM _{2.5} (TPY)	CO (TPY)	NO _x (TPY)	SO ₂ (TPY)	VOC (TPY)	GHGs (TPY)
0.59	0.59	0.59	0.52	0.62	0.01	384	749
FHAP/TAC Emissions			CAS Number	Potential Annual Emissions (TPY)	Federal HAP	CAO Air Toxic	
Organics							
Acetaldehyde			75-07-0	1.9E-05	Yes	Yes	
Acetone			67-64-1	17.9	No	Yes	
Acrolein			107-02-8	1.7E-05	Yes	Yes	
Benzene			71-43-2	3.6E-05	Yes	Yes	
n-Butyl Alcohol			71-36-3	4.09	No	Yes	
Diethylene Glycol Butyl Ether			112-34-5	3.6E-03	Yes	Yes	
Ethyl Benzene			100-41-4	0.25	Yes	Yes	
Ethylene Glycol Butyl Ether			111-76-2	0.06	No	Yes	
Formaldehyde			50-00-0	0.28	Yes	Yes	
Hexamethylene Diisocyanate			822-06-0	8.3E-03	Yes	Yes	
Hexane			100-54-3	2.9E-05	Yes	Yes	
Methanol			67-56-1	1.8E-01	Yes	Yes	
Methyl Ethyl Ketone			78-93-3	2.46	No	Yes	
Naphthalene			91-20-3	1.9E-06	Yes	Yes	
POM (inc. PAHs)			--	2.5E-06	Yes	Yes	
iso-Propyl Alcohol			67-63-0	18.29	No	Yes	
Propylene			115-07-1	3.3E-03	No	Yes	
Propylene Glycol Methyl Ether Acetate			108-65-6	6.14	No	Yes	
Toluene			108-88-3	3.1E-01	Yes	Yes	
Xylenes			1330-20-7	1.23	Yes	Yes	
Inorganic Gases							
Ammonia			7664-41-7	2.0E-02	No	Yes	
Metals							
Arsenic			7440-38-2	1.2E-06	Yes	Yes	
Beryllium			7440-41-7	7.5E-08	Yes	Yes	
Cadmium			7440-43-9	6.9E-06	Yes	Yes	
Chromium, Hexavalent			18540-29-9	8.7E-04	Yes	Yes	
Cobalt			7440-48-4	5.9E-04	Yes	Yes	
Manganese			7439-96-5	2.4E-06	Yes	Yes	
Mercury			7439-97-6	1.6E-06	Yes	Yes	
Nickel			7440-02-0	1.3E-05	Yes	Yes	
Selenium			7782-49-2	1.5E-07	Yes	Yes	
Total Emissions (TPY) =				51.2		51.2	
Max Individual FHAP (TPY) =					2.26		
					1.23		
Note:							
All pollutants other than VOC are no more than the de minimis level in LRAPA title 12 after rounding and adjusting for significant figures.							

9Wood - 209600					
Emission Detail Sheets					
Natural Gas Combustion Emission Calculations					
Combustion Specifications					
Max Heat Input	1.46	MMBtu/hr			
Heat Value - Natural Gas	1026	MMBtu/MMCF			
Max Hrs Operation	8760	hr/yr			
	NG Emission Factor	NG Emission Factor	Potential Emissions		
Criteria Pollutants	(lb/MMCF)	Units	(TPY)		
PM/PM ₁₀ /PM _{2.5}	2.5	lbs/MMCF	0.02		
Carbon Monoxide	84	lbs/MMCF	0.52		
Nitrogen Oxides	100	lbs/MMCF	0.62		
Sulfur Dioxide	1.7	lbs/MMCF	0.01		
VOCs	5.5	lbs/MMCF	0.03		
GHGs (CO ₂ equiv.)	117	lbs/MMBtu	749		
	CAS Number	NG Emission Factor	Potential Emissions	Federal HAP	CAO Air Toxic
FHAP/TAC Emissions		(lb/MMCF)	(TPY)		
Organics					
Acetaldehyde	75-07-0	0.0031	1.9E-05	Yes	Yes
Acrolein	67-64-1	0.0027	1.7E-05	Yes	Yes
Benzene	107-02-8	0.0058	3.6E-05	Yes	Yes
Ethyl Benzene	100-41-4	0.0069	4.3E-05	Yes	Yes
Formaldehyde	50-00-0	0.0123	7.7E-05	Yes	Yes
Hexane	100-54-3	0.0046	2.9E-05	Yes	Yes
Naphthalene	91-20-3	0.0003	1.9E-06	Yes	Yes
POM (inc. PAHs)		0.0004	2.5E-06	Yes	Yes
Propylene	115-07-1	0.5300	3.3E-03	No	Yes
Toluene	108-88-3	0.0265	1.7E-04	Yes	Yes
Xylenes	1330-20-7	0.0197	1.2E-04	Yes	Yes
Inorganic Gases					
Ammonia	7664-41-7	3.2000	2.0E-02	No	Yes
Metals					
Arsenic	7440-38-2	2.0E-04	1.2E-06	Yes	Yes
Beryllium	7440-41-7	1.2E-05	7.5E-08	Yes	Yes
Cadmium	7440-43-9	1.1E-03	6.9E-06	Yes	Yes
Chromium, Hexavalent	18540-29-9	1.4E-03	8.7E-06	Yes	Yes
Manganese	7439-96-5	3.8E-04	2.4E-06	Yes	Yes
Mercury	7439-97-6	2.6E-04	1.6E-06	Yes	Yes
Nickel	7440-02-0	2.1E-03	1.3E-05	Yes	Yes
Selenium	7782-49-2	2.4E-05	1.5E-07	Yes	Yes
	Total Emissions =		2.4E-02	5.5E-04	2.4E-02
GHG-Related Emission Factors					
Pollutant	Natural Gas	GWP			
	(kg/MMBtu)				
Carbon Dioxide (CO ₂)	53.06	1			
Methane (CH ₄)	1.0E-03	25			
Nitrous Oxide (N ₂ O)	1.0E-04	298			
Notes:					
Combustion units include two natural gas only boilers for SB-3 with a maximum heat input rating of 1.26 MMBtu per hour each.					
Combustion units include two natural gas only boilers for the wood drying unit with a maximum heat input rating of 0.2 MMBtu per hour each.					
Both sets of combustion units are redundant. The calculation assumes only one combustion unit operating at a time.					
PM/PM ₁₀ /PM _{2.5} , SO ₂ , NO _x , CO and VOC emissions factors are based on DEQ Emission Factors Gas Fired Boilers, AQ-EF05 (08/01/2011).					
GHG emission factors are from 40 CFR 98, Tables C-1 and C-2.					
Toxics emission factors, except for metals and ammonia, are based on Ventura County APCD "AB 2588 Combustion Emission Factors".					
Toxics emission factors for metals are based on US EPA AP-42 Section 1.4 - Natural Gas Combustion (07/1998).					
Ammonia emission factor is based on US EPA WebFire SCC 1-002-006-02 for an uncontrolled boiler.					
Chromium assumed to be hexavalent.					

9Wood - 209600	
Emission Detail Sheets	
Particulate Matter Emissions from Overspray	
65%	= Minimum Coating Transfer Efficiency
98.80%	= Minimum Filter PM Removal Efficiency

PM/PM10/PM2.5 Emissions

Manufacturer	Product Type	Product # (MSDS)	Gallons Used	Coating Wt./Gal.	Solids (% wt)	Solids Usage (lbs/yr)	Actual PM Emissions (lbs/yr)	Uncontrolled Potential PM Emissions (lbs/yr)	Unlimited Potential PM Emissions (lbs/yr)
Rodda	Dye Stain Base	7998555	5755	6.77	0.00%	0.00	0.0	0.0	0.0
Cloverdale	Premium Precat White 275 20 Sheen	95478120	442	8.83	42.00%	1,639.20	6.9	2,192.8	26.3
Sherwin Williams	Black Maxitoner Pigment	6500-80203	32	9.25	29.00%	85.84	0.4	114.8	1.4
Sherwin Williams	White Maxitoner Pigment	AC0001493	3	9.25	29.00%	8.05	0.0	10.8	0.1
Sherwin Williams	HAPS Free Reducer	R7K305	5725	6.52	0.00%	0.00	0.0	0.0	0.0
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	10	6.52	0.00%	0.00	0.0	0.0	0.0
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	22	8.92	40.00%	78.50	0.3	105.0	1.3
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	1	8.54	40.00%	1.71	0.0	2.3	0.0
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	10	9.00	40.00%	36.90	0.2	49.4	0.6
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	25	8.80	40.00%	88.88	0.4	118.9	1.4
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	12	8.96	64.00%	68.81	0.3	92.1	1.1
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	85	11.81	30.00%	301.16	1.3	402.9	4.8
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	5	8.51	45.00%	19.15	0.1	25.6	0.3
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	5	8.49	47.00%	19.95	0.1	26.7	0.3
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	2321	7.84	30.00%	5,458.99	22.9	7,302.5	87.6
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	755	7.84	30.00%	1,775.76	7.5	2,375.4	28.5
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	23776	7.82	30.00%	55,778.50	234.3	74,614.7	895.4
Sherwin Williams	Polane Catalyst	V66V29	285	8.78	75.00%	1,876.73	7.9	2,510.5	30.1
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XXC20277-7383	2309	8.09	23.00%	4,296.36	18.0	5,747.2	69.0
Total PM Emissions (TPY) =							0.15	47.8	0.57

Unlimited Potential HAP/TAC Emissions				Oregon Toxic Air Contaminants			
				Federal Hazardous Air Pollutants			
Manufacturer	Product Type	Product Code	Chromium (7440-47-3)		Cobalt (7440-48-4)		
			% wt.	lbs/yr	% wt.	lbs/yr	
Rodda	Dye Stain Base	7998555	0.00%	0.0E+00	0.00%	0.0E+00	
Cloverdale	Premium Precat White 275 20 Sheen	95478120	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Black Maxitoner Pigment	6500-80203	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	White Maxitoner Pigment	AC0001493	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	HAPS Free Reducer	R7K305	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	1.33%	1.4E+00	0.00%	0.0E+00	
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	0.65%	3.2E-01	0.00%	0.0E+00	
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	0.00%	0.0E+00	1.00%	1.2E+00	
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XXN2978-4383	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Sherstain White Pigment	S64XXW259-4383	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Polane Catalyst	V66V29	0.00%	0.0E+00	0.00%	0.0E+00	
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XXC20277-7383	0.00%	0.0E+00	0.00%	0.0E+00	
TPY =			8.6E-04	TPY =	5.9E-04		

Note:
 Uses the same production assumptions as VOC emissions to determine potential.
 PM emissions represents PM / PM10 / PM2.5 emissions.
 Chromium assumed to be hexavalent.
 All lines assumed to achieve 65% transfer efficiency. SB-3 and SB-4 are probably achieving closer to 90% transfer efficiency.

9Wood - 209600 Emission Detail Sheets VOC and HAP/TAC Emissions			Potential Annual Hours
Spray Booth	Estimated Actual Hours		Hours
SB-4	265		1,752
SB-3	2,872		8,760
SB-2	265		1,752
SB-1	265		1,752

VOC Emissions		Product Code	Gallons Used	Coating (lb/gal)	VOC (lb/gal)	VOC (%wt)	Actual VOC Emissions (lbs/yr)	Unlimited Potential VOC Emissions (lbs/yr)
Rodda	Dye Stain Base	799855	5755	6.77	0.78	11.55%	4,500	17,201
Cloverdale	Premium Precat White 275 20 Sheen	95478120	442	8.63	4.44	50.28%	1,962	7,501
Sherwin Williams	Black Maxitoner Pigment	6500-80203	32	9.25	3.85	41.62%	123	471
Sherwin Williams	White Maxitoner Pigment	AC0001493	3	9.25	3.85	41.62%	12	44
Sherwin Williams	HAPS Free Reducer	R7K305	5725	6.52	5.86	89.88%	33,549	128,222
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	10	6.52	5.92	90.80%	59	226
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	22	8.92	5.70	63.90%	125	479
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	1	8.54	6.61	77.40%	3	13
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	10	9.00	2.88	32.00%	30	113
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	25	8.80	5.45	61.93%	138	526
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XN2976-4383	12	8.96	5.96	66.52%	72	273
Sherwin Williams	Sherstain White Pigment	S64XW259-4383	85	11.81	6.01	50.89%	511	1,952
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	5	8.51	0.57	6.70%	3	11
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	5	8.49	0.82	9.66%	4	16
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	2321	7.84	5.41	69.01%	12,557	47,991
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	755	7.84	5.41	69.01%	4,085	15,611
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	23776	7.82	5.46	69.82%	129,817	496,159
Sherwin Williams	Polane Catalyst	V66V29	285	8.78	2.19	24.94%	624	2,385
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XC20277-7383	2309	8.09	5.57	68.85%	12,861	49,155
Total VOC Emissions (TPY) =							101	384

Unlimited Potential HAP/TAC Emissions		Federal Hazardous Air Pollutants																																					
pe	Product Code	Diethylene Glycol Butyl Ether (112-34-5)		Ethylbenzene (100-41-4)		Formaldehyde (50-00-0)		Hexamethylene Diisocyanate (822-06-0)		Methanol (67-56-1)		Toluene (108-88-3)		Xylene (1330-20-7)		Acetone (67-64-1)		n-Butyl Alcohol (71-36-3)		Ethylene Glycol Butyl Ether (111-76-2)		Methyl Ethyl Ketone (78-93-3)		iso-Propyl Alcohol (67-63-0)		Propylene Glycol Methyl Ether Acetate (108-65-6)													
		% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr	% wt.	lbs/yr												
Rodda	Dye Stain Base	799855	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Cloverdale	Premium Precat White 275 20 Sheen	95478120	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	4.74%	355	5.62%	422	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Black Maxitoner Pigment	6500-80203	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	White Maxitoner Pigment	AC0001493	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	HAPS Free Reducer	R7K305	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	14.26%	18,284	0.00%	0.00	0.00%	0.00	0.00%	0.00	14.73%	18,887	0.00%	0.00	0.00%	0.00									
Sherwin Williams	HAPS Compliant Lacquer Thinner	RK7320	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	5.00%	11.31	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Universal Dye Stain Concentrate, Black	S61B500	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Universal Dye Stain Concentrate, Blue	S61L505	57.00%	7.20	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Universal Dye Stain Concentrate, Red	S61R503	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Universal Dye Stain Concentrate, Yellow	S61Y504	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Sherstain Burnt Umber Pigment	S64XN2976-4383	0.00%	0.00	0.20%	0.55	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.00%	2.73	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Sherstain White Pigment	S64XW259-4383	0.00%	0.00	0.10%	1.95	0.00%	0.00	0.00%	0.00	10.00%	195	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Kem Aqua Lacquer Sanding Sealer	T65F520	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Kem Aqua Plus Clear, low VOC	T75F558	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 Black	T77CXB19809	0.00%	0.00	0.00%	0.00	0.10%	47.99	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	700.67	0.00%	0.00	0.00%	0.00	3.16%	1,516.52	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Sherwood 9420S Precat Topcoat: 9Wood 2 White	T77CXW19808	0.00%	0.00	0.00%	0.00	0.10%	15.61	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	227.92	0.00%	0.00	0.00%	0.00	3.16%	493.31	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	LV Haps Free Precat Topcoat (Unicoat)	T77F90022	0.00%	0.00	0.00%	0.00	0.10%	496.16	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	1.46%	7,244	0.00%	0.00	0.00%	0.00	3.16%	15,679	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Polane Catalyst	V66V29	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.70%	16.73	0.00%	0.00	0.00%	0.00	0.00%	0.00	50.00%	1,193	0.00%	0.00	5.00%	119	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%								
Sherwin Williams	Sherwood Urethane 15 Sheen Topcoat	V84XC20277-7383	0.00%	0.00	1.00%	492	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	5.00%	2,458	0.00%	0.00	0.00%	0.00	0.00%	0.00	10.00%	4,915.51	0.00%	0.00	25.00%	12,288.78	0.00%	0.00									
TPY =			3.6E-03		TPY =	0.25		TPY =	2.8E-01		TPY =	8.3E-03		TPY =	0.18		TPY =	0.31		TPY =	1.23		TPY =	17.9		TPY =	4.09		TPY =	6.0E-02		TPY =	2.46		TPY =	18.29		TPY =	6.14

Note:
 Potential emissions are based on the following assumptions:
 - SB-3 is the production line. SB-4 is the samples and R&D line. SB-1 and SB-2 are used for touch-up and odd shapes.
 - SB-3 has operated for an average of 239.3 hours per month since installation.
 - SB-4 has operated for an average of 22.1 hours per month since installation.
 - SB-1 and SB-2 are assumed to operate for a similar number of hours as SB-4.
 - Potential emissions for SB-3 are based on 8760 hours of operation.
 - Potential emissions for SB-1, SB-2, and SB-3 are each based on 1752 hours of operation (20% of 8760 hours).
 Actual emissions are based on the period June 2022 through May 2023.