

**Lane Regional Air Protection Agency
Standard 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 – Wood partitions and fixtures
NAICS	337212 – Custom architectural woodwork and millwork manufacturing
Source Categories (LRAPA title 37, Table 1)	B:69. – Surface coating operations: coating operations whose actual or expected usage of coating materials is

	greater than 250 gallons per month 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)	February 15
Semi-Annual Report (due date)	February 15, August 15
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
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	N
SM-80	N
Title V	Y
Part 68 Risk Management	N
ACDP (SIP)	N
Major FHAP Source	N
Federal Major Source	N
NA New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N

Clean Air Mercury Rule (CAMR)	N
TACT	N
>20 Megawatts	N

Permittee Identification

1. 9Wood, Inc. ("the facility") operates a suspended wood ceilings manufacturing facility at 999 South A Street, Springfield, Oregon.

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 facility was built in August of 2005. 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. The two boilers are considered Categorically Insignificant Activities under LRAPA title 12. 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, and it is not equipped with outboard dryers or a conveyance system.

Reasons for Permit Action and Fee Basis

3. The facility proposes to increase production. As such, the facility has requested an increase in the PSEL for VOCs from 99 TPY to 135 TPY. The proposed modification is considered a Type 4 change under LRAPA 34-035.
4. Because the proposed modification will increase potential VOC emissions above 100 TPY, the facility will be considered a Title V source. Upon issuance of the modified Standard ACDP, the facility will have up to 12 months to apply for a Title V permit under OAR 340-218-0040(1)(a)(A).

Attainment Status

5. 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.

Permitting History

6. 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 automatic spray booth (SB-3)
12/18/2020	NC-209600-A20	Installation of a second automatic spray booth (SB-4)
01/25/2021	Addendum No. 1	Incorporation of NC-209600-A20
Upon issuance	Addendum No. 2	Increase the PSEL for VOCs from 99 TPY to 135 TPY.

Emission Unit Description

7. The emission units regulated by the permit are the following:

EU ID	Emission Unit Description	PCD ID	Control Device Description
SB-1	Manual Spray Booth	DF-1	Dry Filters
SB-2	Samples Spray Booth	DF-2	Dry Filters
SB-3	Automatic Spray Booth Line	DF-3	Dry Filters
SB-4	Automatic Spray Booth Line	DF-3	Dry Filters

Specific Emission Limitations

8. Emission units SB-1 through SB-4 are subject to the visible emission limitations under LRAPA 32-010(3). These emission units must not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three minutes in any one hour. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
9. Emission units SB-1 and SB-2 are subject to particulate matter emission limitations under LRAPA 32-015(2)(b). For sources installed, constructed or modified on or after June 1, 1970 but prior to April 16, 2015 for which there are no representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
10. The coating booth exhausts of SB-3 and SB-4 are subject to particulate matter emission limitations under LRAPA 32-015(2)(c). For sources other than fuel burning equipment, refuse burning equipment and fugitive emissions, installed, constructed or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is demonstrated through a plant survey of visible emissions to be completed at least once a quarter. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
11. Emission units 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 process. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
12. Under LRAPA 32-007, the facility must prepare an Inspection and Maintenance Plan (I&M Plan) for the spray coating operations. If the I&M Plan is updated, the permittee must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the permittee to amend the plan. At minimum, the I&M Plan must include inspection schedules for each spray booth and the associated dry filters used to control overspray from the spray coating operations. The I&M Plan must identify procedures for recording the date and time of any

inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.

Typically Achievable Control Technology (TACT)

13. 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, an 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. The modified emission units SB-1 through SB-4 are each expected to have VOC emissions greater than 1 ton per year. While LRAPA has not performed a formal TACT determination for VOCs, LRAPA has determined that the following requirements likely meets TACT: (1) the use of air assisted airless (AAA) spray guns (or similar), (2) the use of dry filters with a control efficiency of at least 98.8% for particulate matter as determined by the manufacturer, (3) prohibiting manual spray gun system cleaning from being performed outside a container that collects the gun cleaning solvent, and (4) requiring personnel who apply surface coatings to be trained in proper spray application of surface coatings. 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 similar) results in the application of the least amount of VOC per square foot of product produced for their process. In addition, spray booths do not typically have add-on control technology due to the low concentration of VOCs and the high air flow rates resulting from these processes.

Plant Site Emission Limits (PSELs)

14. 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)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	
PM	NA	0	0	NA	NA	0.14
PM ₁₀	NA	0	0	NA	NA	0.14
PM _{2.5}	NA	0	0	NA	NA	0.14
CO	NA	0	0	NA	NA	0.90
NO _x	NA	0	0	NA	NA	1.08
SO ₂	NA	0	0	NA	NA	0.02
VOC	NA	0	0	99	135	135
GHG	NA	0	0	NA	NA	1,292
Individual FHAP	NA	NA	NA	9	9	1.67
Aggregate FHAP	NA	NA	NA	24	24	2.56

15. 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 during any consecutive 12 calendar month period during calendar years 2000 through 2010.

16. 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).
17. The PSELs were established based upon the following:
 - 17.a. 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.
 - 17.b. The facility requested an increase in the VOC PSEL of 36 tons per year as part of the Type 4 modification application submitted on April 26, 2022. Because this increase is considered a Type B State NSR action under LRAPA 38-0010(2)(d)(B), there will be no increase in the netting basis for VOCs. Because this increase in VOC emissions will exceed the netting basis by the SER, the facility must perform an air quality modeling analysis under LRAPA 40-0050(1)&(2) and 40-0060. See the Air Quality Analysis section of this review report for more information.

Significant Emission Rate

18. The PSEL increase over the netting basis is less than the Significant Emission Rate (SER) as defined in LRAPA title 12 for all pollutants, except for VOCs. For VOCs, the increase over netting basis is due to the proposed modification.

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)
PM	NA	NA	NA	NA	25
PM ₁₀	NA	NA	NA	NA	15
PM _{2.5}	NA	NA	NA	NA	10
CO	NA	NA	NA	NA	100
NO _x	NA	NA	NA	NA	40
SO ₂	NA	NA	NA	NA	40
VOC	135	135	0	36	40
GHGs	NA	NA	NA	NA	75,000

Unassigned Emissions and Emission Reduction Credits

19. 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	0.14	0	0	25
PM ₁₀	0	0.14	0	0	15

Pollutant	Proposed Netting Basis (TPY)	PTE (TPY)	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM _{2.5}	0	0.14	0	0	10
CO	0	0.90	0	0	100
NO _x	0	1.08	0	0	40
SO ₂	0	0.02	0	0	40
VOC	0	135	0	0	40
GHGs	0	1,292	0	0	75,000

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

20. This source is located in an area that is designated attainment or unclassified for all regulated pollutants other than CO and PM₁₀. For pollutants other than CO and PM₁₀, the proposed PSELs are less than the federal major source threshold for non-listed sources of 250 TPY per regulated pollutant and are not subject to Major NSR. For CO and PM₁₀, the source is located in a maintenance area. The proposed PSELs for CO and PM₁₀ are less than the 100 TPY threshold that determines the applicability of Major NSR in a maintenance area.

Type A and Type B State NSR

21. For regulated pollutants other than VOCs, the proposed modification will not have emissions per regulated pollutant equal to or greater than the SER over the netting basis that would require Type A or B State NSR. For VOCs, emissions of VOCs will increase to an amount that is equal to or greater than the SER over the netting basis. Because the source is located in an area that is attainment for ozone, VOCs will be subject to Type B State NSR.
22. Within an attainment or unclassified area, a source subject to Type B State NSR must:
- 22.a. Determine compliance with the NAAQS, PSD increments, and other requirements in PSD Class II and Class III areas under LRAPA 40-0050(1)&(2), as applicable.
 - 22.b. Since this facility will emit ozone precursors (VOC or NO_x) at or above the SER over the netting basis and the facility is located within 100 km of the Salem-Keizer ozone maintenance area, this project must also meet the requirements for demonstrating net air quality benefit under LRAPA 38-0510 and 38-0520.

Air Quality Analysis

23. Under LRAPA 40-0050(1), a facility must demonstrate compliance with the NAAQS, PSD increments, and other requirements in PSD Class II areas. LRAPA has performed a single source impact analysis as described below to demonstrate the proposed modification at the facility will not cause or contribute to a new violation of a NAAQS and PSD increment. This single source impact analysis is sufficient to show compliance if the modeled impact from emission increases equal to or greater than a SER above the netting basis due to the proposed modification being evaluated is less than any applicable Class II significant impact levels (SIL) specified in LRAPA title 12, Table 1. The use of the SIL by itself satisfies LRAPA 40-0050(1)(b) because the background ozone concentrations in Lane County are more than the SIL below the applicable NAAQS and the formation of ozone does not result in concentration gradients in the vicinity of the source. In addition, based on the results of the single-source impact analysis, LRAPA has determined that the facility will not have a material effect on the Salem-Keizer ozone maintenance area under LRAPA 38-0520(2)(b).

24. The United States Environmental Protection Agency (U.S. EPA) established a two-tiered approach for addressing impacts of single-source emissions on ozone (O₃). The first tier involves the use of appropriate and technically credible relationships between emissions and ambient impacts. The second tier involves use of chemical transport modeling to obtain single-source impacts. In December 2016, U.S. EPA published a draft document, "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tools for Ozone and PM_{2.5} under the PSD Permitting Program". The term MERP is used to describe an emission rate of a precursor that is expected to result in a change in ambient O₃ or PM_{2.5} concentration that would not cause or contribute to a violation of the NAAQS. Separate MERPs are developed for each precursor and each pollutant. Projected increases in the O₃ precursor pollutants NO_x and VOC that are below the MERP are part of a demonstration that the facility will not cause or contribute to violation of the O₃ NAAQS. Based upon the guidance, the most conservative, or lowest, MERPs from the Western US were used to determine whether the proposed emissions from the facility would cause or contribute to a violation of the NAAQS for ozone. Using the modeled concentration for the minimum MERP source in the Western US, an emission rate equivalent to a 1.0 parts per billion (ppb) impact was computed for NO_x and VOC. The facility's pollutant emissions are below these MERPs, but the contributions should be considered together to determine if the facility would cause or contribute to a violation of the NAAQS for ozone. The ratio of emissions to the MERP for each precursor were calculated and then added together. Since the sum of the ratio is not above 1.0 ppb, as shown below, the combined impact of NO_x and VOC emissions from this facility will not cause or contribute to a violation of the NAAQS for ozone.

Precursor	Western US MERP (tons)	Hypothetical Emissions (TPY)	Associated Modeled Concentration (ppb)	9Wood Emissions (TPY)	Ratio 9Wood / MERP (ppb)	Ozone SIL (ppb)
VOC	1053	1000	0.95	135	0.128	
NO _x	184	500	2.72	1	0.005	
Total =					0.134	1.0
Calculation: 9Wood O ₃ contribution = (1/500 * 2.72 ppb) + (135/1000 * 0.95 ppb) = 0.134 ppb < 1.0 ppb O ₃ SIL						

Federal Hazardous Air Pollutants/Toxic Air Contaminants

25. Potential annual FHAP emissions for this facility are based on a ratioed material balance for coating operations and standard emission factors for natural gas combustion. Potential FHAP emissions are projected to be 2.56 tons per year, with xylenes having the highest single FHAP emissions at 1.67 tons per year. A major source of FHAPs is defined as having potential FHAP emissions of at least 10 tons per year of any single HAP and 25 tons per year of the aggregate of all FHAPs. This facility does not have potential FHAP emissions exceeding these thresholds and is considered a minor or area source of FHAPs.
26. Under the Cleaner Air Oregon 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, therefore, is 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 regulates approximately 260 toxic air contaminants (TAC) that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 TACs. The FHAPs and TACs listed below are based upon safety data sheets and standard emission factors for the types of emission units at this facility. 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 TACs. Until then, this source will be required to report TAC emissions triennially.

27. The table below represents the potential emissions of FHAPs/TACs from this facility assuming operation at full capacity:

CAS Number	Pollutant	PTE (TPY)	FHAP	CAO TAC
Organics				
75-07-0	Acetaldehyde	3.3E-05	Yes	Yes
67-64-1	Acetone	30.7	No	Yes
107-02-8	Acrolein	2.9E-05	Yes	Yes
71-43-2	Benzene	6.2E-05	Yes	Yes
71-36-3	n-Butyl Alcohol	3.79	No	Yes
100-41-4	Ethyl Benzene	0.27	Yes	Yes
111-76-2	Ethylene Glycol Butyl Ether	0.53	No	Yes
50-00-0	Formaldehyde	0.33	Yes	Yes
822-06-0	Hexamethylene Diisocyanate	2.5E-02	Yes	Yes
110-54-3	Hexane	4.9E-05	Yes	Yes
78-93-3	Methyl Ethyl Ketone	2.71	No	Yes
80-62-6	Methyl Methacrylate	0.27	Yes	Yes
91-20-3	Naphthalene	3.2E-06	Yes	Yes
NA	POM (inc. PAHs)	4.3E-06	Yes	Yes
67-63-0	iso-Propyl Alcohol	13.79	No	Yes
115-07-1	Propylene	5.7E-03	No	Yes
108-65-6	Propylene Glycol Methyl Ether Acetate	6.77	No	Yes
108-88-3	Toluene	2.9E-04	Yes	Yes
1330-20-7	Xylenes	1.67	Yes	Yes
Inorganic Gases				
7664-41-7	Ammonia	3.4E-02	No	Yes
Metals				
7440-38-2	Arsenic	2.2E-06	Yes	Yes
7440-41-7	Beryllium	1.3E-07	Yes	Yes
7440-43-9	Cadmium	1.2E-05	Yes	Yes
7440-47-3	Chromium, Hexavalent	1.5E-05	Yes	Yes
7439-96-5	Manganese	4.1E-06	Yes	Yes
7439-97-6	Mercury	2.8E-06	Yes	Yes
7440-02-0	Nickel	2.3E-05	Yes	Yes
7782-49-2	Selenium	2.6E-07	Yes	Yes
Total (TPY) =		60.9	2.56	60.9

National Emission Standards for Hazardous Air Pollutants (NESHAP)

28. 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.
29. 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.

New Source Performance Standards (NSPS)

30. There are no sources at this facility for which NSPS are applicable.

Toxic Release Inventory

31. The Toxics Release Inventory (TRI) is a federal program that tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. 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.

Compliance History

32. 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	In compliance

33. LRAPA has issued the following violation notices and/or taken the following enforcement actions against this facility since the facility began operation:

- 33.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.

Performance Test Results

34. 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

35. The facility is required to keep and maintain a record of the following information for a period of five (5) years.

Activity/Parameter	Units	Minimum Recording Frequency
VOC/FHAP-containing Material Usage	Gallons or Pounds	Monthly
VOC/FHAP-containing Material Density	Pounds per Gallon	Maintain current information at all times
VOC/FHAP-containing Material VOC and FHAP Content	% by Weight	Maintain current information at all times
Spray Booth Filter Particulate Matter Control Efficiency	%	Maintain documentation from each manufacturer
Manual Spray Booth Training	NA	Maintain documentation of training for spray coating personnel
Spray Booth Inspections	NA	Each inspection
Spray Booth Filter Replacement	NA	Upon Replacement
Inspection and Maintenance Plan	NA	Maintain the current version on-site

- 35.a. VOC/HAP-containing materials include, but are not limited to, coatings, lacquers, thinners, stains, topcoats, solvents, adhesives, cleaning, and wash-off materials
- 35.b. The density and VOC/HAP content information must be supplied from Certified Product Data Sheet (CPDS) or Safety Data Sheet (SDS) provided by the manufacturer/supplier of the VOC/HAP containing material.

Reporting Requirements

36. The facility must submit to LRAPA the following reports by the dates indicated in the table below:

Report	Reporting Period	Due Date
Semiannual emissions as calculated according to Condition 4 of the permit, including the supporting process parameter and emission factor information.	Semiannual	February 15, August 15
The excess emission log information required by Condition G.13 of the permit, as applicable.	Annual	February 15

Public Notice

37. The draft permit modification was on public notice from May 16, 2022 to June 20, 2022. No written comments were submitted during the 35-day comment period.

9Wood - 209600					
Emission Detail Sheets					
Boiler Emission Calculations					
Boiler Specifications					
Max Heat Input	2.52	MMBtu/hr			
Heat Value - Natural Gas	1026	MMBtu/MMCF			
Max Hrs Operation	8760	hr/yr			
Criteria Pollutants					
	NG Emission Factor	NG Emission Factor	Potential Annual Emissions		
	(lb/MMCF)	Units	(TPY)		
Pollutant					
PM/PM ₁₀ /PM _{2.5}	2.5	lbs/MMCF	0.03		
Carbon Monoxide	84	lbs/MMCF	0.90		
Nitrogen Oxides	100	lbs/MMCF	1.08		
Sulfur Dioxide	1.7	lbs/MMCF	0.02		
VOCs	5.5	lbs/MMCF	0.06		
GHGs (CO ₂ equiv.)	117	lbs/MMBtu	1,292		
FHAP/TAC Emissions					
	NG Emission Factor	Potential Annual Emissions			
	(lb/MMCF)	(TPY)	Federal HAP	CAO Air Toxic	
Pollutant					
Organics					
Acetaldehyde	0.0031	3.3E-05	Yes	Yes	
Acrolein	0.0027	2.9E-05	Yes	Yes	
Benzene	0.0058	6.2E-05	Yes	Yes	
Ethyl Benzene	0.0069	7.4E-05	Yes	Yes	
Formaldehyde	0.0123	1.3E-04	Yes	Yes	
Hexane	0.0046	4.9E-05	Yes	Yes	
Naphthalene	0.0003	3.2E-06	Yes	Yes	
POM (inc. PAHs)	0.0004	4.3E-06	Yes	Yes	
Propylene	0.5300	5.7E-03	No	Yes	
Toluene	0.0265	2.9E-04	Yes	Yes	
Xylenes	0.0197	2.1E-04	Yes	Yes	
Inorganic Gases					
Ammonia	3.2000	3.4E-02	No	Yes	
Metals					
Arsenic	2.0E-04	2.2E-06	Yes	Yes	
Beryllium	1.2E-05	1.3E-07	Yes	Yes	
Cadmium	1.1E-03	1.2E-05	Yes	Yes	
Chromium, Hexavalent	1.4E-03	1.5E-05	Yes	Yes	
Manganese	3.8E-04	4.1E-06	Yes	Yes	
Mercury	2.6E-04	2.8E-06	Yes	Yes	
Nickel	2.1E-03	2.3E-05	Yes	Yes	
Selenium	2.4E-05	2.6E-07	Yes	Yes	
Total Emissions =		4.1E-02	9.4E-04	4.1E-02	
GHG-Related Emission Factors					
	Natural Gas				
	(kg/MMBtu)	GWP			
Pollutant					
Carbon Dioxide (CO ₂)	53.06	1			
Methane (CH ₄)	1.0E-03	25			
Nitrous Oxide (N ₂ O)	1.0E-04	298			
Notes:					
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							
3,673	= SB-3 2021 Hours of Operation							
Manufacturer	Product Type	Product # (MSDS)	Gallons Used	Coating Wt./Gal.	Solids (% wt)	Solids Usage (lbs/yr)	2021 PM Emissions (TPY)	Potential PM Emissions (TPY)
Sherwin Williams	9420S LV Pre-Cat Topcoat 10 Gloss	T77F90022	23889	7.85	8.62%	16,165	3.4E-02	8.1E-02
Sherwin Williams	HAPs Compliant Lacquer Thinner	R7K305	5600	6.84	0.00%	0	0.0E+00	0.0E+00
Sherwin Williams	Urethane Top Coat	F63FH2	2807	8.09	31.00%	7,040	1.5E-02	3.5E-02
Rodda	Dye Stain Base	7998555	2460	6.76	0.00%	0	0.0E+00	0.0E+00
Valspar	Valtec Pre-Cat Lacquer 275 White	NUW3122	1045	8.55	25%	2,234	4.7E-03	1.1E-02
Sherwin Williams	Polane Catalyst	V66V29	340	8.78	74%	2,209	4.6E-03	1.1E-02
				Total PM Emissions (TPY) =			0.06	0.14
Note:								
Assumes 2021 emissions are primarily from SB-3.								
Potential emissions are based on scaling 2021 hours of operation on SB-3 from 3,673 to 8,760 hours of operation.								
Potential emissions based on top 6 products that represent >99% of total usage.								



**Lane Regional Air Protection Agency
 Standard Air Contaminant Discharge Permit**

**Addendum 1
Review Report**

9Wood, Inc.

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

Source Information:

Primary SIC	2541 - Wood Office and Store Fixtures, Partitions, Shelving, and Lockers
Secondary SIC	--
Primary NAICS	337212 – Custom Architectural Woodwork and Millwork Manufacturing
Secondary NAICS	--
Source	B:69. – Surface coating

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

Compliance and Emissions Monitoring Requirements:

Unassigned Emissions	N
Emission Credits	N
Special Conditions	N
Compliance Schedule	N

Source Test [date(s)]	N
COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Annual Report (due date)	February 15
SACC (due date)	July 15
GHG Report (due date)	N
Quarterly Report (due date)	N

Monthly Report (due dates)	N
Excess Emissions Report	Y
Other Reports (due date)	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	N
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	N
SM-80	Y
Title V	N
Part 68 Risk Management	N
ACDP (SIP)	N
Major FHAP Source	N
Federal Major Source	N

New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N

Permittee Identification

1. 9Wood, Inc. ("the facility") operates a suspended wood ceilings manufacturing facility at 999 South A Street, Springfield, Oregon.

General Background

2. Prior to this addendum, the facility used three (3) paint booths for spray painting suspended wood ceiling components. The facility was built in August of 2005. 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 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 with maximum heat input rating of one (1) MMBtu per hour to dry the coating at three different locations on the automated spray line.

Reasons for Permit Action and Fee Basis

3. The facility proposes to operate a second automatic spray booth line, to be known as SB-4, for spray painting suspended wood ceiling components. The new automatic spray booth line SB-4 will be identical to automatic spray booth line SB-3, but will be used for research & development and to smooth the transition from sampling to production. As such, the new automatic spray booth line SB-4 will not be equipped with outboard dryers or a conveyance system. The new automatic spray booth line SB-4 will be equipped with dry filters to control paint overspray emissions. LRAPA has determined that this request qualifies as a Non-PSD/NSR Basic Technical Permit Modification under Title 37, Table 2, Part 4.

Attainment Status

4. The facility is located inside the Eugene Springfield Air Quality Management Area. The facility is located in an area that has been designated an attainment area for PM_{2.5}, NO₂, SO₂, Ozone, Pb and a maintenance area for CO and PM₁₀.

Permitting History

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

Date Approved	Permit Action Type	Description
10/03/2010	Simple "High" ACDP	Initial permit
08/27/2014	Approval to Construct NC-209600-A14	Installation of an open face samples spray booth (SB-2).
10/27/2014	Addendum No. 1	Incorporation of the approval to construct NC-209600-A14
03/21/2016	Simple "High" ACDP	Renewal
05/28/2019	Standard ACDP	Initial permit, including installation of automatic spray booth line SB-3
12/18/2020	Approval to Construct NC-209600-A20	Installation of automatic spray booth line SB-4

Emission Unit Description

6. The installation and operation of automatic spray booth line SB-4 requires revising the list of significant emission units at the facility. There are no other changes to the existing emission unit descriptions as a result of this project:

EU ID	Emission Unit Description	Control Device Description	PCD ID
SB-4	Automatic Spray Booth Line	Dry Filters	

Emission Limitations Applicable to Automatic Spray Booth Line SB-4

7. SB-4 is subject to the visible emission limitations under LRAPA 32-010(3). This emission unit may not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three minutes in any one hour. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
8. The coating booth exhaust of SB-4 is subject to particulate matter emission limitations under LRAPA 32-015(2)(c). For sources other than fuel burning equipment, refuse burning equipment and fugitive emissions, installed, constructed or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
9. SB-4 is 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 the process. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
10. Under LRAPA 32-007, the facility must prepare an Inspection and Maintenance Plan (I&M Plan) for the spray coating operations. If the I&M Plan is updated, the permittee must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the permittee to amend the plan. At minimum, the I&M Plan must include inspection schedules for each spray booth and the associated dry filters used to control overspray from the spray coating operations. The I&M Plan must identify procedures for recording the date and time of any inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.

Typically Achievable Control Technology (TACT) for SB-4

11. LRAPA 32-008 requires a new or modified emission unit at a facility to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or a Type A State NSR under Title 38, an NSPS under Title 46, or any other standard applicable only to modified sources in Title 32, Title 33 or Title 39 for the regulated pollutant emitted; the facility is required to have a permit; the new emission unit would have emissions of any criteria pollutant equal to or greater than 1 ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT. The new automatic spray booth line SB-4 is expected to have VOC emissions greater than 1 ton per year. 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 similar), (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 similar) results in the application of the least amount of VOC per square foot of product produced for their particular application.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

12. Because the facility's PSELs for all regulated pollutants are below the major source threshold of 250 TPY and the PM₁₀ PSEL is below the Significant Emission Rates (SER) in LRAPA Title 38, the facility is not subject to LRAPA's New Source Review (NSR) requirements for PM₁₀, nor the Prevention of Significant Deterioration (PSD) requirements for any other regulated pollutant, as applicable.

Plant Site Emission Limits (PSELs)

13. Provided below is a summary of the baseline emissions rates, netting basis, and PSELs as listed in the Standard ACDP issued on May 28, 2019. The facility has not requested any changes to these PSELs as part of the installation and operation of the new automated spray booth line SB-4:

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)	
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)
PM	0	0	0	NA	NA
PM ₁₀	0	0	0	NA	NA
PM _{2.5}	NA	0	0	NA	NA
SO ₂	0	0	0	NA	NA
NO _x	0	0	0	NA	NA
CO	0	0	0	NA	NA
VOC	0	0	0	99	99
GHG	0	0	0	NA	NA
Individual HAP	NA	NA	NA	9	9
Aggregate HAP	NA	NA	NA	24	24

14. 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 during any consecutive 12 calendar month period during calendar years 2000 through 2010.
15. The netting basis for all pollutants are set at zero because the facility has no baseline emission rates. The netting basis will remain at zero for each regulated pollutant until the facility undergoes an increase listed under LRAPA 42-0046(3)(e).
16. The PSELs were established based upon the following
- 16.a. No PSELs were established for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO and GHGs because these pollutants will be emitted at less than the de minimis emission level listed in LRAPA Title 12 from the entire source
- 16.b. The facility previously requested a VOC PSEL of 99 TPY under the Standard ACDP issued on May 28, 2019. The facility has not requested an increase in the VOC PSEL as part of this Addendum:

Federal Hazardous Air Pollutants/Toxic Air Contaminants

17. The potential federal HAP emissions from this facility are less than the major source thresholds of 10 tons per year for an individual HAP and 25 tons per year for the aggregate of all federal HAPs. The potential emissions of total federal HAPs from the facility are estimated to be 5.16 tons per year, with

xylylene being the highest single HAP at 2.51 tons per year. In addition, the facility currently has PSELS for federal HAPs that limit emissions to no more than 9 tons per year for an individual federal HAP and 24 tons per year for the aggregate of all federal HAPs. As such, the facility is considered a minor or area source of federal HAPs. The facility has not requested any changes to the federal HAP limitations as a result of the installation and operation of the new automatic spray booth line SB-4.

18. Under the Cleaner Air Oregon program, only existing facilities that have been notified by LRAPA and new facilities are required to perform risk assessments. This facility 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 regulates approximately 260 toxic air contaminants that have Risk Based Concentrations established in rule. All FHAPs are on the list of approximately 600 toxic air contaminants. After the facility 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, this facility will be required to report toxic air contaminant emissions triennially.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

19. The potential federal HAP emissions from this facility are less than the major source thresholds of 10 tons per year for an individual HAP and 25 tons per year for the aggregate of all federal HAPs. In addition, the facility currently has PSELS for federal HAPs that limit emissions to no more than 9 tons per year for an individual federal HAP and 24 tons per year for the aggregate of all federal HAPs. As such, the facility is considered a minor or area source of federal HAPs.
20. The new automatic spray booth line SB-4 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.
21. The new automatic spray booth line SB-4 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.

New Source Performance Standards (NSPS)

22. The new automatic spray booth line SB-4 is not subject to any NSPS.

Enforcement History

23. The following is a chronological list and description since the startup of the facility in 2005 of all the inspection and enforcement-related actions for the facility
 - 23.a. A Comprehensive Compliance Status inspection was performed on February 12, 2013. The facility was determined to be in compliance with the applicable permit conditions.
 - 23.b. An informational inspection was performed on January 23, 2019 to view the new automated spray coating line (SB-3). Based upon this visit, it was determined that the new automated spray coating line (SB-3) was installed without approval from LRAPA and that the facility VOC emissions exceeded the PSEL of 39 tons per year in their current Simple "High" ACDP. As a result, LRAPA has initiated enforcement action and the facility has 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 or to submit appropriate construction documents prior to the installation and operation of a new continuous coating line and for exceeding the VOC PSEL of 40 tons per year.

Performance Test Results

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

Recordkeeping Requirements

25. The installation and operation of the new automatic spray booth line SB-4 does not result in any changes to the existing recordkeeping requirements.

Reporting Requirements

26. The installation and operation of the new automatic spray booth line SB-4 does not result in any changes to the existing reporting requirements.

Public Notice

27. Pursuant to subparagraph 37-066(4)(b)(A), issuance of a Non-PSD/NSR Basic Technical Permit Modification to a Standard ACDP requires public notice as a Category I permit action. Therefore, there will be no prior notice or public participation. However, LRAPA will maintain a list of all permit actions processed under Category I and make the list available for public review.

JJW/cmw
01/25/2021

9Wood - 209600
Emission Detail Sheets
Facility Potential Criteria Pollutant Emissions Summary

EU ID	Emission Unit Description	PM (TPY)	PM10 (TPY)	PM2.5 (TPY)	SO2 (TPY)	NOx (TPY)	CO (TPY)	VOC (TPY)*	GHG (TPY)
SB-1	Manual Spray Booth	0.41	0.41	0.41	--	--	--	252	--
SB-2	Samples Spray Booth				--	--	--		--
SB-3	Automated Spray Booth Line				1.5E-02	0.86	0.72		1,024
SB-4	Automated Spray Booth Line				--	--	--		--
Total =		0.41	0.41	0.41	0.01	0.9	0.7	252	1,024

Note:
*The VOC PSEL limits the facility to 99 TPY

9Wood - 209600
Emission Detail
Sheets

Natural Gas Combustion Units

EU ID	Emission Unit	Rating	Unit
SB-3	Automated Spray Booth Line	2.000	MMBtu/hr
Total =		2.000	MMBtu/hr

Avg. Gross Heat Value of Natural Gas
1020 MMBtu/MMCF

Natural Gas Combustion Emissions

EU ID	PM		PM10		PM2.5		SO2		NOx		CO		VOC		GHGs
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	TPY
SB-3	4.9E-03	0.02	4.9E-03	0.02	4.9E-03	0.02	5.1E-03	1.5E-02	0.20	0.86	0.16	0.72	1.1E-02	0.05	1,024
Total =	4.9E-03	0.02	4.9E-03	0.02	4.9E-03	0.02	5.1E-03	1.5E-02	0.20	0.86	0.16	0.72	1.1E-02	0.05	1,024

Natural Gas Combustion Emission
Factors

PM	PM10	PM2.5	SO2		NOx	CO	VOC	GHGs
			Hourly	Annual				
2.5	2.5	2.5	2.6	1.7	100	84	5.5	512

Notes:

All emission factors are from ODEQ AQ-EF05 - Emission Factors from Gas Fired Boilers (uncontrolled medium boilers < 100 million Btu/hr), except GHGs
All emission factors expressed as pounds of pollutant per MMCF of natural gas combusted, except GHGs
GHG emission factor is expressed as (tons of GHG x hr)/(MMBtu per year)
GHG emission factor is derived from 40 CFR 98, Tables C-1 and C-2 using GWP of 1 for CO2, 25 for methane, and 298 for nitrous oxide
Assumes operation of the boiler at maximum heat input capacity for 8760 hours per year

9Wood - 209600
Emission Detail
Sheets
Particulate Matter Emissions from Overspray

Coating Manufacturer	Product Type	Product # (MSDS)	Gallons Used	Coating Wt./Gal.	Solids % By Weight	Solids lbs.	2019 PM Emissions (TPY)	Potential PM Emissions (TPY)
Sherwin Williams	Urethane Sealer	F63FH3	409	8.05	26.28%	865	1.8E-03	6.7E-03
Sherwin Williams	Urethane Top Coat	F63FH2	1140	8.09	24.60%	2,269	4.8E-03	1.8E-02
Sherwin Williams	LV Haps Free Precat Topcoat (unicoat)	T77F90022	20229	7.85	30.00%	47,639	0.10	3.7E-01
Total (TPY)						=	25.4	0.11
								0.39

Minimum Filter Efficiency = 98.80%
Minimum Coating Transfer Efficiency = 65%

Note:
2019 emissions are primarily from SB-3
Potential emissions are based on scaling 2019 hours of operation on SB-3 from 2,382 to 8,760 hours of operation

[illegible]

**Lane Regional Air Protection Agency
 Standard Air Contaminant Discharge Permit**

Review Report

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

Source Information:

SIC	2541
NAICS	337212
Source Categories (LRAPA Title)	B:69. – Surface coating operations: coating operations whose actual or expected usage of coating materials is

37, Table 1)	greater than 250 gallons per month 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
Special Conditions	N
Compliance Schedule	N

Source Test [date(s)]	N
COMS	N
CEMS	N
Ambient monitoring	N

Reporting Requirements

Semi-Annual Report (due date)	July 15 February 15
SACC (due date)	N
NSPS Report (due date)	N

Monthly Report (due dates)	N
Excess Emissions Report	Y
Other Reports	N

Air Programs

NSPS (list subparts)	N
NESHAP (list subparts)	N
CAM	N
Regional Haze (RH)	N
Synthetic Minor (SM)	N
Part 68 Risk Management	N
Title V	N
ACDP (SIP)	N
New Source Review (NSR)	N
Prevention of Significant Deterioration (PSD)	N
Acid Rain	N
Clean Air Mercury Rule (CAMR)	N
TACT	N

Permittee Identification

1. 9 Wood, Inc. ("the facility") operates a suspended wood ceilings manufacturing facility at 999 South A Street, Springfield, Oregon.

General Background

2. The facility uses three (3) paint booths for spray painting suspended wood ceiling components. The facility was built in August of 2005. 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 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 with maximum heat input rating of one (1) MMBtu per hour to dry the coating at three different locations on the automated spray line.

Reasons for Permit Action and Fee Basis

3. The facility operates a process listed in LRAPA Title 37, Table 1, Part B (B.69, Surface Coating Operations: coating operations whose actual or expected usage of coating materials is greater than 250 gallons per month, excluding sources that exclusively use non-VOC or non-HAP coatings) and is, therefore, required to obtain a permit. In addition, the facility has requested a PSEL for VOC that is equal to or greater than the applicable SER for that regulated pollutant. The facility has applied for a standard ACDP as required under Title 37. The standard ACDP will be valid for 5 years upon issuance.

Attainment Status

4. The facility is located inside the Eugene Springfield Air Quality Management Area. The facility is located in an area that has been designated an attainment area for PM, PM_{2.5}, VOC, NO_x, SO₂, Pb and a maintenance area for CO and PM₁₀.

Permitting History

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

Date Approved	Permit Action Type	Description
10/03/2010	Simple "High" ACDP	Initial Permit
08/27/2014	Approval to Construct NC-209600-A14	Installation of an open face samples spray booth (SB-2).
10/27/2014	Addendum No. 1	Incorporation of the approval to construct NC-209600-A14
03/21/2016	Simple "High" ACDP	Renewal

Emission Unit Description

6. The emission units regulated by the permit are the following:

EU ID	Emission Unit Description	Control Device Description	PCD ID
SB-1	Manual Spray Booth	Dry Filters	DF-1
SB-2	Samples Spray Booth	Dry Filters	DF-2
SB-3	Automatic Spray Booth Line	Dry Filters	DF-3

Emission Limitations for SB-1 and SB-2

7. SB-1 and SB-2 are subject to the visible emission limitations under LRAPA 32-010(3). These emission units may not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three minutes in any one hour. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.

8. SB-1 and SB-2 are subject to particulate matter emission limitations under LRAPA 32-015(2)(b). For sources installed, constructed or modified on or after June 1, 1970 but prior to April 16, 2015 for which there are no representative compliance source test results, the particulate matter emission limit is 0.14 grains per dry standard cubic foot. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
9. SB-1 and SB-2 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 the process. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
10. Under LRAPA 32-007, the facility must prepare an Inspection and Maintenance Plan (I&M Plan) for the spray coating operations. If the I&M Plan is updated, the permittee must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the permittee to amend the plan. At minimum, the I&M Plan must include inspection schedules for each spray booth and the associated dry filters used to control overspray from the spray coating operations. The I&M Plan must identify procedures for recording the date and time of any inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.

Emission Limitations for SB-3

11. SB-3 is subject to the visible emission limitations under LRAPA 32-010(3). This emission unit may not have visible emissions equal to or greater than 20% opacity for a period or periods aggregating more than three minutes in any one hour. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours.
12. The coating booth exhaust of SB-3 is subject to particulate matter emission limitations under LRAPA 32-015(2)(c). For sources other than fuel burning equipment, refuse burning equipment and fugitive emissions, installed, constructed or modified after April 16, 2015, the particulate matter emission limit is 0.10 grains per dry standard cubic foot. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours. No particulate matter emissions are expected from the three drying oven exhausts on SB-3.
13. SB-3 is 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 the process. Compliance is 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. The permittee is required to take corrective action if any visible emissions are identified or to conduct a Modified EPA Method 9 test within 24 hours

14. Under LRAPA 32-007, the facility must prepare an Inspection and Maintenance Plan (I&M Plan) for the spray coating operations. If the I&M Plan is updated, the permittee must submit the updated copy to LRAPA for review. If LRAPA determines the plan is deficient, LRAPA may require the permittee to amend the plan. At minimum, the I&M Plan must include inspection schedules for each spray booth and the associated dry filters used to control overspray from the spray coating operations. The I&M Plan must identify procedures for recording the date and time of any inspections, identification of the equipment inspected, the results of the inspection, and the actions taken if repairs or maintenance are necessary.

Typically Achievable Control Technology (TACT) for SB-1, SB-2, and SB-3

15. LRAPA 32-008 requires a new or modified emission unit at a facility to meet TACT if the emission unit meets the following criteria: The emission unit is not subject to Major NSR or a Type A State NSR under Title 38, an NSPS under Title 46, or any other standard applicable only to modified sources in Title 32, Title 33 or Title 39 for the regulated pollutant emitted; the facility is required to have a permit; the new emission unit would have emissions of any criteria pollutant equal to or greater than 1 ton per year; and LRAPA determines that the proposed air pollution control devices and emission reduction processes do not represent TACT. The proposed emission units are each expected to have VOC emissions greater than 1 ton per year. 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 similar), (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 similar) results in the application of the least amount of VOC per square foot of product produced for their particular application.

New Source Review (NSR) and Prevention of Significant Deterioration (PSD)

16. Because the proposed PSEs for all regulated pollutants are below the major source threshold of 250 TPY and the PM₁₀ PSEL is below the Significant Emission Rates (SER) in LRAPA Title 38, the facility is not subject to LRAPA's New Source Review (NSR) requirements for PM₁₀, nor the Prevention of Significant Deterioration (PSD) requirements for any other regulated pollutant, as applicable.

Plant Site Emission Limits (PSEs)

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

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)			SER (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	PSEL Increase over netting basis (TPY)	
PM	0	0	0	NA	NA	--	25
PM ₁₀	0	0	0	NA	NA	--	15
PM _{2.5}	NA	0	0	NA	NA	--	10
SO ₂	0	0	0	NA	NA	--	40
NO _x	0	0	0	NA	NA	--	40
CO	0	0	0	NA	NA	--	100
VOC	0	0	0	39	99	99	40
GHG	0	0	0	NA	NA	--	75,000
Individual HAP	NA	NA	NA	9	9	--	NA

Pollutant	Baseline Emission Rate (TPY)	Netting Basis		Plant Site Emission Limit (PSEL)			SER (TPY)
		Previous (TPY)	Proposed (TPY)	Previous PSEL (TPY)	Proposed PSEL (TPY)	PSEL Increase over netting basis (TPY)	
Aggregate HAP	NA	NA	NA	24	24	--	NA

18. 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 during any consecutive 12 calendar month period during calendar years 2000 through 2010.
19. The netting basis for all pollutants are set at zero because the facility currently has a Simple "High" ACDP. The netting basis will remain at zero for each regulated pollutant until the facility undergoes an increase listed under LRAPA 42-0046(3)(e).
20. The PSELs were established based upon the following:
 - 20.a. No PSELs were established for PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO and GHGs because these pollutants will be emitted at less than the de minimis emission level listed in LRAPA Title 12 from the entire source.
 - 20.b. The facility requested an increase in the VOC PSEL of 60 tons per year as part of the application submitted on March 19, 2019, to be covered by a Standard ACDP. Because this increase is considered a Type B State NSR action under LRAPA 38-0010(2)(d)(B), there will be no increase in the netting basis for VOCs. Because this increase in VOC emissions will exceed the netting basis by the SER, the facility must perform an air quality modeling analysis under LRAPA 40-0050(1)&(2) and 40-0060. See the Ozone Analysis section of this review report for more information.

Ozone Analysis

21. This facility must comply with Type B State New Source Review as required under LRAPA 38-0010(2)(d)(B) because VOC emissions are increasing to an amount that is equal to or greater than the SER over the netting basis (99 TPY). A facility subject to state NSR must comply with LRAPA 40-0050(1) and (2) for each regulated pollutant for which emissions will exceed the netting basis by the SER or more due to the proposed modification. Under LRAPA 40-0050(1), a facility must demonstrate compliance with the NAAQS (National Ambient Air Quality Standard), PSD increments, and other requirements in PSD Class II areas. LRAPA has performed a single source impact analysis as described below to demonstrate the proposed modification at the facility will not cause or contribute to a new violation of a NAAQS and PSD increment. This single source impact analysis is sufficient to show compliance if the modeled impacts from emission increases equal to or greater than a SER above the netting basis due to the proposed modification being evaluated is less than the Class II significant impact levels specified in Title 12, Table 1. The use of the SIL (Significant Impact Level) by itself satisfies LRAPA 40-0050(1)(b) because the background ozone concentrations in Lane County are more than the SIL below the applicable NAAQS and the formation of ozone does not result in concentration gradients in the vicinity of the source. Under LRAPA 38-0270(2)(a), the facility is presumed to have a significant impact if located within 100 kilometers of a designated ozone area. The facility is 88 kilometers from the Salem-Keizer designated ozone maintenance area. Based upon the Formula Method under LRAPA 38-0520(2)(a), a net air quality benefit demonstration is not required because the facility is located at a distance equal to or greater than $D = (99 \text{ TPY}/40) \times 30 \text{ km} = 74 \text{ km}$ from the Salem-Keizer designated ozone maintenance area.

22. The United States Environmental Protection Agency (U.S. EPA) established a two-tiered approach for addressing impacts of single-source emissions on ozone (O₃). The first tier involves the use of appropriate and technically credible relationships between emissions and ambient impacts. The second tier involves use of chemical transport modeling to obtain single-source impacts. In December 2016, U.S. EPA published a draft document, "Guidance on the Development of Modeled Emission Rates for Precursors (MERPs) as a Tier 1 Demonstration Tools for Ozone and PM_{2.5} under the PSD Permitting Program". The term MERP is used to describe an emission rate of a precursor that is expected to result in a change in ambient O₃ or PM_{2.5} concentration that would not cause or contribute to a violation of the NAAQS. Separate MERPs are developed for each precursor and each pollutant. Projected increases in the O₃ precursor pollutants NO_x and VOC that are below the MERP are part of a demonstration that the facility will not cause or contribute to violation of the O₃ NAAQS. Based upon the guidance, the most conservative, or lowest, MERPs from the Western US were used to determine whether the proposed emissions from the facility would cause or contribute to a violation of the NAAQS for ozone. Using the modeled concentration for the minimum MERP source in the Western US, an emission rate equivalent to a 1.0 parts per billion (ppb) impact was computed for NO_x and VOC. The facility's pollutant emissions are below these MERPs, but the contributions should be considered together to determine if the facility would cause or contribute to a violation of the NAAQS for ozone. The ratio of emissions to the MERP for each precursor were calculated and then added together. Since the sum of the ratio is not above 1.0 ppb, as shown below, the combined impact of NO_x and VOC emissions would not cause or contribute to a violation of the NAAQS for ozone.

Precursor	Western US MERP (tons)	Hypothetical Emissions (TPY)	Associated Modeled Concentration (ppb)	9 Wood Emissions (TPY)	Ratio 9 Wood / MERP (ppb)	Ozone SIL (ppb)
VOC	1053	1000	0.95	99	0.094	
NO _x	184	500	2.72	1	0.005	
Total =					0.099	1.0
Calculation: 9 Wood O ₃ contribution = (1/500 * 2.72 ppb) + (99/1000 * 0.95 ppb) = 0.099 ppb < 1.0 ppb O ₃ SIL						

Unassigned Emissions and Emission Reduction Credits

23. The facility has zero (0) tons/year of 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	Unassigned Emissions (TPY)	Emission Reduction Credits (TPY)	SER (TPY)
PM	0	0	25
PM ₁₀	0	0	15
PM _{2.5}	0	0	10
SO ₂	0	0	40
NO _x	0	0	40
CO	0	0	100
VOC	0	0	40
GHGs	0	0	75,000

Significant Emission Rate

24. The VOC PSEL is being increase to 99 tons per year as part of this permit action. An analysis of the proposed PSEL increases over the Netting Basis is shown in the following table:

Pollutant	SER (TPY)	Requested Increase Over Previous Netting Basis (TPY)	Increase Due to Utilizing Capacity That Existed In The Baseline Period (TPY)	Increase Due to Physical Changes or Changes In The Method of Operation (TPY)	Increase Due to Use of Generic PSEL Level (TPY)
PM	25	0	0	0	0
PM ₁₀	15	0	0	0	0
PM _{2.5}	10	0	0	0	0
SO ₂	40	0	0	0	0
NO _x	40	0	0	0	0
CO	100	0	0	0	0
VOC	40	60	0	60	0
GHGs	75,000	0	0	0	0

Federal Hazardous Air Pollutants

25. The total HAPs for 2019 are projected to be 1.15 tons per year, with xylene being the highest single HAP at 0.44 tons per year. Potential annual HAP emissions are based on a ratio of the maximum hours in a calendar year to the normal operating hours of this facility (8760 hours/4160 hours). Potential HAPs are projected to be 2.42 tons per year, with xylene being the highest single HAP at 0.92 tons per year. A major source of HAPs is defined as a source with potential HAP emissions of 10 tons per year of any single HAP and 25 tons per year of the aggregate of all HAPs. This facility does not have potential HAP emissions exceeding these thresholds and is considered an "area source" of HAPs. As an area source of HAPs, the facility is not subject to any major source National Standard for Hazardous Air Pollutants (NESHAP), nor is the facility currently subject to any area source NESHAP requirements.

Hazardous Air Pollutants	2019 Projection (TPY)	Potential Annual Emissions (TPY)
Formaldehyde (50-00-0)	0.04	0.08
Methanol (67-56-1)	0.05	0.10
Ethylbenzene (100-41-4)	0.10	0.20
Toluene (108-88-3)	0.36	0.76
Hexamethylene Diisocyanate (882-06-0)	6.0E-03	1.3E-02
Xylene (1330-20-7)	0.44	0.92
Chromium Compounds as Chromium (7440-47-3)	1.4E-03	3.0E-03
Glycol Ethers (--)	0.16	0.34
S. 112(b) Federal HAPs (highest individual / aggregate) =	0.44 / 1.15	0.92 / 2.42

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

26. The potential federal HAP emissions from this facility are less than the major source thresholds of 10 tons per year for an individual HAP and 25 tons per year for the aggregate of all federal HAPs. In addition, the facility currently has PSELs for federal HAPs that limit emissions to no more than 9 tons

per year for an individual federal HAP and 24 tons per year for the aggregate of all federal HAPs. As such, the facility is considered a minor or area source of federal HAPs.

27. 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.
28. 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.

New Source Performance Standards (NSPSs)

29. There are no sources at this facility for which NSPS have been promulgated.

Enforcement History

30. The following is a chronological list and description since the startup of the facility in 2005 of all the inspection and enforcement-related actions for the facility
 - 30.a. A Comprehensive Compliance Status inspection was performed on February 12, 2013. The facility was determined to be in compliance with the applicable permit conditions.
 - 30.b. An informational inspection was performed on January 23, 2019 to view the new automated spray coating line (SB-3). Based upon this visit, it was determined that the new automated spray coating line (SB-3) was installed without approval from LRAPA and that the facility VOC emissions exceeded the PSEL of 39 tons per year in their current Simple "High" ACDP. As a result, LRAPA has initiated enforcement action and the facility has 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 or to submit appropriate construction documents prior to the installation and operation of a new continuous coating line and for exceeding the VOC PSEL of 40 tons per year.

Performance Test Results

31. 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

32. The facility is required to keep and maintain a record of the following information for a period of five (5) years.

Activity	Parameter	Units	Recording Frequency
VOC/HAP-containing Material Usage	Material Usage	Gallons or Pounds	Monthly
VOC/HAP-containing Material Usage	Density of Material	Pounds per Gallon	Maintain current information at all times
VOC-containing Material Usage	VOC Content	% By Weight	Maintain current information at all times
HAP-containing Material Usage	HAP Content	% By Weight	Maintain current information at all times
Spray Booth Filter Particulate Matter Control Efficiency	Control Efficiency	%	Maintain documentation from each manufacturer
Manual Spray Booth Training	Training Logs / Certifications	NA	Maintain documentation of training for spray coating personnel

Spray Booth Inspections	Occurrence	NA	Each inspection
Spray Booth Filter Replacement	Occurrence	NA	Upon Replacement
Inspection and Maintenance Plan	Document	NA	Maintain the current version on-site

- 32.a. VOC/HAP-containing materials include, but are not limited to, coatings, lacquers, thinners, stains, topcoats, solvents, adhesives, cleaning, and wash-off materials
- 32.b. The density and VOC/HAP content information must be supplied from Certified Product Data Sheet (CPDS) or Safety Data Sheet (SDS) provided by the manufacturer/supplier of the VOC/HAP containing material.

Reporting Requirements

33. The facility is required to submit semi-annual reports that include the previous 12-month consecutive calendar month VOC and HAP emissions calculations, recordkeeping requirements, and any entries in the upset log as required by permit Condition G15. The first semi-annual report is due **July 15th** of each year and the second semi-annual report is due **February 15th** of each year.

Public Notice

34. The draft permit was on public notice from April 23, 2019 to May 27, 2019. No written comments were submitted during the 35-day comment period

JJW/cmw
05/28/19

9 Wood - 209600
Emission Detail Sheets

Facility Emission Summary

EU ID	Emission Unit Description	PM (TPY)	PM ₁₀ (TPY)	PM _{2.5} (TPY)	SO ₂ (TPY)	NO _x (TPY)	CO (TPY)	VOC (TPY)	GHG (TPY)
SB-1	Manual Spray Booth	0.20	0.20	0.20	--	--	--	118	--
SB-2	Samples Spray Booth				--	--	--		--
SB-3	Automated Spray Booth Line				1.5E-02	0.86	0.72		1,024
Total =		0.20	0.20	0.20	0.01	0.9	0.7	118	1,024

9 Wood - 209600
Emission Detail Sheets

Natural Gas Combustion Units

EU ID	Emission Unit	Rating	Unit
SB-3	Automated Spray Booth Line	2.000	MMBtu/hr
Total =		2.000	MMBtu/hr

Avg. Gross Heat Value of Natural Gas
1020 MMBtu/MMCF

Natural Gas Combustion Emissions

EU ID	PM		PM ₁₀		PM _{2.5}		SO ₂		NO _x		CO		VOC		GHGs
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	TPY
SB-3	4.9E-03	0.02	4.9E-03	0.02	4.9E-03	0.02	5.1E-03	1.5E-02	0.20	0.86	0.16	0.72	1.1E-02	0.05	1,024
Total =	4.9E-03	0.02	4.9E-03	0.02	4.9E-03	0.02	5.1E-03	1.5E-02	0.20	0.86	0.16	0.72	1.1E-02	0.05	1,024

Natural Gas Combustion Emission Factors

SO ₂								
PM	PM ₁₀	PM _{2.5}	Hourly	Annual	NO _x	CO	VOC	GHGs
2.5	2.5	2.5	2.6	1.7	100	84	5.5	512

All emission factors are from ODEQ AQ-EF05 - Emission Factors from Gas Fired Boilers (uncontrolled medium boilers < 100 million Btu/hr), except GHGs

All emission factors expressed as pounds of pollutant per MMCF of natural gas combusted, except GHGs

GHG emission factor is expressed as (tons of GHG x hr)/(MMBtu per year)

GHG emission factor is derived from 40 CFR 98, Tables C-1 and C-2 using GWP of 1 for CO₂, 25 for methane, and 298 for nitrous oxide

9 Wood - 209600

Emission Detail Sheets

Particulate Matter Emissions from Overspray

Coating Manufacturer	Product Type	Product # (MSDS)	Gallons Used	Coating Wt./Gal.	Solids % By Weight	Solids lbs.	2019 Projected PM Emissions (TPY)	Potential PM Emissions (TPY)
Sherwin Williams	Urethane Sealer	F63FH3	400	8.05	26.28%	846	1.8E-03	3.7E-03
Sherwin Williams	Urethane Top Coat	F63FH2	600	8.09	24.60%	1,194	2.5E-03	5.3E-03
Sherwin Williams	LV Haps Free Precat Topcoat (unicoat)	T77F90022	16286	7.85	30.00%	38,354	0.08	0.17
Total (TPY)						=	20.2	0.18

Minimum Filter Efficiency = 98.80%

Minimum Coating Transfer Efficiency = 65%

