

**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 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)

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

| PM | PM ₁₀ | PM _{2.5} | SO ₂ | | NO _x | CO | VOC | GHGs |
|-----|------------------|-------------------|-----------------|--------|-----------------|----|-----|------|
| | | | Hourly | Annual | | | | |
| 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%

| 9 Wood - 209600 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|----------------|---------|----------|----------|--------|--------|--------------|------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|----------------|--------|-------------|--------|----------------|-----------|-------------|--------------|-------------|-----------|--|--------------|--|------------|--|------------|--|-------------|--|-------------|--|---------------|--|-----------|-----------|
| Emission Detail Sheets | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOC and HAP Emissions | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2019 | | 2019 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | Projected | Potential | Formaldehyde | | Methanol | | Ethylbenzene | | Toluene | | HDI | | Xylene | | Chromium | | Glycol Ethers | | Projected | Potential |
| | | | | | | | | | | | | | | | | | | | | | | | | Emissions | Emissions | (50-00-0) | | (67-56-1) | | (100-41-4) | | (108-88-3) | | (882-06-0) | | (1330-20-7) | | (7440-47-3) | | (N230) | | Emissions | Emissions |
| Coating | Product Type | Product # | Gallons | Coating | VOC | % By | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manufacturer | | (MSDS) | Used | Wt./Gal. | Wt./Gal. | Weight | lbs. | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | % By | lbs. | Weight | lbs. | Weight | lbs. | | | | | | | | | | | | | | | |
| Rodda | Barrier III Rust Inhibitive Metal Primer - | 708099 | 16 | 11.2 | 3.32 | 29.64% | 53.1 | 112 | 0.00% | - | 0.00% | - | 10.00% | 17.92 | 0.00% | - | 0.00% | - | 40.00% | 71.68 | 0.00% | - | 0.00% | - | 89.6 | 188.7 | | | | | | | | | | | | | | | | | |
| Rodda | Dye Stain Base | 7998555 | 500 | 6.7 | 0.67 | 10.00% | 335 | 705 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | - | - | | | | | | | | | | | | | | | | | |
| Rodda | Lacquer Wood Primer Surfacer - Black | 28001 | 100 | 9.84 | 4.79 | 48.68% | 479 | 1,009 | 0.00% | - | 10.00% | 98.40 | 10.00% | 98.40 | 10.00% | 98.40 | 0.00% | - | 20.00% | 196.80 | 0.00% | - | 0.00% | - | 492 | 1,036 | | | | | | | | | | | | | | | | | |
| Rudd | 275 VOC Precat Lacquer Satin | 651885.ST | 50 | 7.78 | 0.574 | 7.38% | 28.7 | 60.4 | 0.00% | - | 0.00% | - | 0.43% | 1.67 | 0.00% | - | 0.00% | - | 2.00% | 7.78 | 0.00% | - | 0.00% | - | 9.45 | 19.91 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Dye Stain, Black | S61X87-4383 | 190 | 7.07 | 3.87 | 54.74% | 735 | 1,548 | 0.00% | - | 0.00% | - | 0.30% | 4.03 | 42.00% | 564.19 | 0.00% | - | 1.00% | 13.43 | 0.00% | - | 0.00% | - | 582 | 1,225 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | HAPs Free Stain Base | R7K305 | 2375 | 6.84 | 5.86 | 85.67% | 13,918 | 29,307 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 2.00% | 324.90 | 324.90 | 684.16 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Kem Aqua Lacquer, DRE | T75F528 | 58 | 10.76 | 2.00 | 18.59% | 116 | 244 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | - | - | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Kem Aqua Lacquer Sanding Sealer | T65F520 | 35 | 8.51 | 0.54 | 6.35% | 18.9 | 39.8 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | - | - | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Polane Catalyst | V66V29 | 195 | 8.78 | 2.19 | 24.94% | 427 | 899 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.70% | 11.98 | 0.00% | - | 0.00% | - | 0.00% | - | 12.0 | 25.2 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Universal Dye Stain Concentrate, Black | S61B500 | 18 | 8.92 | 5.70 | 63.90% | 103 | 216 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 1.33% | 2.14 | 0.00% | - | 2.14 | 4.50 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Universal Dye Stain Concentrate, Blue | S61L505 | 1.5 | 8.54 | 6.61 | 77.40% | 9.92 | 20.9 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | - | - | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Universal Dye Stain Concentrate, Red | S61R503 | 12.25 | 9 | 2.88 | 32.00% | 35.3 | 74.3 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.65% | 0.72 | 0.00% | - | 0.72 | 1.51 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Universal Dye Stain Concentrate, Yellow | S61Y504 | 22.25 | 8.8 | 5.45 | 61.93% | 121 | 255 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | - | - | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Urethane Sealer | F63FH3 | 400 | 8.05 | 5.42 | 67.33% | 2,168 | 4,565 | 0.00% | - | 0.00% | - | 0.90% | 28.98 | 0.00% | - | 0.00% | - | 5.00% | 161.00 | 0.00% | - | 0.00% | - | 190.0 | 400.1 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Urethane Top Coat | F63FH2 | 600 | 8.09 | 5.57 | 68.85% | 3,342 | 7,037 | 0.00% | - | 0.00% | - | 0.90% | 43.69 | 0.00% | - | 0.00% | - | 5.00% | 242.70 | 0.00% | - | 0.00% | - | 286.4 | 603.1 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | LV Haps Free Precat Topcoat (unicat) | T77F90022 | 16286 | 7.85 | 5.48 | 69.81% | 89,247 | 187,934 | 0.01% | 12.78 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.14% | 178.98 | 0.00% | - | 0.00% | - | 191.77 | 403.82 | | | | | | | | | | | | | | | | | |
| Sherwin Williams | Wiping Stain, Sherstain White | S64XXW259-4383 | 53 | 11.81 | 6.01 | 50.89% | 319 | 671 | 0.00% | - | 0.00% | - | 0.00% | - | 10.00% | 62.59 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 62.6 | 132 | | | | | | | | | | | | | | | | | |
| Valspar | Valtec Pre-Cat Lacquer 275 White | NUW3122 | 701 | 8.55 | 0.59 | 6.93% | 415 | 875 | 1.00% | 59.94 | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 0.00% | - | 59.9 | 126 | | | | | | | | | | | | | | | | | |
| | | | | | | | Tons = | 55.94 | 118 | Tons = | 0.04 | Tons = | 0.05 | Tons = | 0.10 | Tons = | 0.36 | Tons = | 6.0E-03 | Tons = | 0.44 | Tons = | 1.4E-03 | Tons = | 0.16 | 1.15 | 2.42 | | | | | | | | | | | | | | | | |