

Facility ID: 1431070324 Issuance type: Final State Permit To Operate

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In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION

Facility ID: 1431070324 Emissions Unit ID: R002 Issuance type: Final State Permit To Operate

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Part II - Special Terms and Conditions

This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

1. For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (a) None.
2. For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (a) None.

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
R002 - Wood coating line and associated cleaning, washoff and gluing operations	OAC rule 3745-31-05(A)(3) (PTI 14-05249)	<p>Volatile Organic Compound (VOC) emissions from coatings shall not exceed 12.98 pounds per hour.</p> <p>See terms A.2.c and A.2.d and A.2.e. See sections B.1 and B.2.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(C) and 3745-17-11(C).</p>
	OAC rule 3745-31-05(C)	<p>Volatile Organic Compound (VOC) emissions from coatings and cleanup materials shall not exceed 8.52 TPY based on a rolling, 12-month summation from emissions unit R002.</p>
	OAC rule 3745-17-11(C)	<p>Volatile Organic Compound (VOC) emissions from emissions units R001, R002, R003 and R004 shall not exceed 24.9 TPY, combined, based on a rolling 12-month summation.</p> <p>See terms A.2.a, A.2.b, A.2.c and A.2.d. See sections B.1 and B.2.</p> <p>See term A.2.f. See sections B.3, C.7, C.8, C.9, and D.5.</p>

2. Additional Terms and Conditions

- (a) The total allowable volatile organic compound (VOC) emissions from all the woodfinishing processes and associated cleaning, washoff and gluing processes located at this facility shall not exceed 24.9 TPY based on a rolling, 12-month summation. "Coating" means a protective, decorative, or functional material applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks and temporary protective coatings. "Cleaning material" means organic solvent used to remove coating materials from equipment used in wood furniture manufacturing operations. "Washoff material" means organic solvent used to remove coating from a substrate. "Gluing material" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units B001, F001, P001, P002, P003, P901, R001, R002, R003, R004, other de minimus air contaminant source, as defined in OAC rule 3745-15-05, and other air contaminant sources exempt from the requirement to obtain a permit-to-install pursuant to OAC rule 3745-31-03 installed subsequent to the issuance of this permit, combined, shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

* This assumes the HAPs emitted are the same as the amount of HAPs used since all HAPs used evaporate.
The VOC content as applied, of each coating employed in this emissions unit shall not exceed 6.49 pounds of VOC per gallon, excluding water.

The VOC content of each cleaning material employed in this emissions unit shall not exceed 6.58 pounds of VOC per gallon.

The hourly emissions limitation outlined above is based upon the emission unit's potential to emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limit.

The permittee shall operate the dry filtration system whenever this emissions unit is in operation.

B. Operational Restrictions

1. The maximum annual coating usage for this emissions unit shall not exceed 2500 gallons, excluding water, based upon a rolling, 12-month summation of the coating usage figures.
2. The maximum annual cleaning material usage shall not exceed 125 gallons, based upon a rolling, 12-month summation of the cleanup material usage figures.
3. The permittee shall operate, and maintain a dry filtration system for the coating operations in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s) with any modifications deemed necessary by the permittee; and all such documentation from the manufacturer and the record of any modifications determined necessary by the permittee or operator shall be maintained as a facility record and shall be made available to the Ohio EPA upon request.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for the emissions units identified in term A.2.b:
 - a. The name and identification number of each coating, employed.
 - b. The individual Hazardous Air Pollutant (HAP)* content for each HAP of each coating in pounds of individual HAP per gallon of coating, as applied.
 - c. The total combined HAP content of each coating in pounds of combined HAPs per gallon of coating, as applied [sum all the individual HAP contents from (b)].
 - d. The number of gallons of each coating employed.
 - e. The name and identification of each cleaning material employed.
 - f. The individual HAP content for each HAP of each cleaning material, in pounds of individual HAP per gallon of cleaning material, as applied.
 - g. The total combined HAP content of each cleaning material, in pounds of combined HAPs per gallon of cleaning material, as applied [sum all the individual HAP contents from (f)].
 - h. The number of gallons of each cleaning material employed.
 - i. The total individual HAP usage for each HAP from all coatings and cleaning materials employed, in pounds or tons per month [for each HAP the sum of (b) times (d) for each coating plus the sum of (f) times (h) for each cleaning material].
 - j. The total combined HAP usage from all coatings and cleaning materials employed, in pounds or tons per month [the sum of (c) times (d) for each coating plus the sum of (g) times (h) for each cleaning material].
 - k. The updated rolling, 12-month summation of usage for each individual HAP emissions**, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
 - l. The updated rolling, 12-month summation of usage for total combined HAP emissions**, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

* A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on an individual emissions unit basis.

** This assumes the HAP(s) emitted are the same as the amounts of HAP(s) used since all HAP(s) used evaporated.

2. The permittee shall collect and record the following information for each month for emissions unit R002 for the purpose of demonstrating compliance with the annual emission rate established under OAC 3745-31-05(A)(3) in section A.1 and the material usage limitations outlined in section B.:
 - a. The company identification for each coating and cleaning material employed.
 - b. The rolling, 12-month summation of coating material usage figures, in gallons.
 - c. The rolling, 12-month summation of cleanup material usage figures, in gallons.
 - d. The VOC content of each coating employed, excluding water and exempt solvents in pounds per gallon.
 - e. The VOC content of each cleaning material employed, in pounds per gallon.
 - f. The rolling, 12-month summation of the total combined VOC emissions from all coatings and cleaning materials employed, in pounds or tons.

[Note: The coating information must be for the coatings employed, including any thinning solvents added at the emissions unit.]

3. The permittee shall collect and record the following information each month for emissions units R001, R002, R003 and R004 for the purpose of demonstrating compliance with the annual VOC emission rate of 24.9 TPY VOC combined, based on a rolling 12-month summation:

- a. The name and identification number of each coating, cleaning, washoff and gluing material employed. "Coating" means a protective, decorative, or functional material applied in a thin layer to a surface. Such materials include, but are not limited to, paints, topcoats, varnishes, sealers, stains, washcoats, basecoats, inks and temporary protective coatings. "Cleaning material" means organic solvent used to remove coating materials from equipment used in wood furniture manufacturing operations. "Washoff material" means organic solvent used to remove coating from a substrate. "Gluing material" means any chemical substance that is applied for the purpose of bonding two surfaces together other than by mechanical means.
- b. The volume, in gallons, of each coating, cleaning, washoff and gluing material employed.
- c. The VOC content of each coating, cleaning, washoff and gluing material, in pounds of VOC per gallon, as applied.
- d. The amount of VOC emitted for all coating, cleaning, washoff and gluing materials employed, in pounds per month (b x c).
- e. The rolling, 12-month* usage for coating, cleaning, washoff and gluing materials, in gallons.
- f. The rolling, 12-month* VOC emission rate in tons per year (in tons, rounded off to one decimal place).

*A rolling, 12-month period includes the previous set of 12 months.

g. Monthly records shall be completed within 15 days following the end of each calendar month and shall include the updated rolling, 12-month VOC emission rate.

The records shall be maintained for five years, and upon request the permittee shall submit such records to the appropriate Ohio EPA District Office or local agency.

4. The permit to install for the combined emissions units R002 and R003 was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the combined results of the modeling for the "worst case" pollutant(s) from combined R002 and R003:

Pollutant : Cyclohexanone
 TLV (ug/m3): 100,300
 Maximum Hourly Emission Rate (lbs/hr): 6.02
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 430
 MAGLC (ug/m3): 2388

Pollutant : Methanol
 TLV (ug/m3): 262,000
 Maximum Hourly Emission Rate (lbs/hr): 29.61
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1921
 MAGLC (ug/m3): 6238

Pollutant : 2-Methyl 1-Propanol
 TLV (ug/m3): 152,000
 Maximum Hourly Emission Rate (lbs/hr): 8.4
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 545
 MAGLC (ug/m3): 3619

Pollutant : Formaldehyde
 TLV (ug/m3): 272
 Maximum Hourly Emission Rate (lbs/hr): 0.077
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5.0
 MAGLC (ug/m3): 6.5

Pollutant : 1-Butanol
 TLV (ug/m3): 60,600
 Maximum Hourly Emission Rate (lbs/hr): 3.5
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 227
 MAGLC (ug/m3): 1443

Physical changes to or in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxics Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in

emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
5. If the permittee determines that the "Air Toxic Policy" will be satisfied with the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is(are) defined as a modification under other provisions of the modification definition [other than (VV)(1)(a)(ii)], then the permittee shall obtain a permit to install prior to the change.
- The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the Air Toxic Policy:"
- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. when the computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.
6. The permittee shall maintain for this facility all purchase orders and invoices of VOC-containing materials. The permittee shall retain such purchase orders and invoices for at least five years from the date of issuance. Upon request, the permittee shall make available to the Director of the Ohio EPA, or an authorized representative of the Director, such purchase orders and invoices for use in confirming the general accuracy of the records maintained and the reports submitted regarding material usage.
7. The permittee shall conduct periodic inspections of the dry filtration system to determine whether the particulate control system is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.
8. In addition to these periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry filtration system while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is able to routinely operate in accordance with the manufacturer's recommendations.
9. The permittee shall document each inspection (periodic and annual) of the dry filtration system and shall maintain the following information:
- a. the date of the inspection;
 - b. a description of each problem identified and the date it was corrected;
 - c. a description of any maintenance and repairs performed; and
 - d. the name of person who performed the inspection.

These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

D. Reporting Requirements

- 1. The permittee shall notify the Hamilton County Department of Environmental Services of any exceedance of the HAP usage limitations set forth in term A.2.b. The permittee shall submit annual reports which identify all exceedances of these limitations, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the reporting period then a report is required stating so.
- 2. The permittee shall submit deviation reports which identify any exceedance of the coating and cleaning, washoff and gluing material VOC content or gallon usage limitations in terms A.2.c, A.2.d, B.1 and B.2.
- 3. The permittee shall submit annual reports which summarize the following for this emissions unit:
 - a. The total VOC emissions from this emissions unit for the previous calendar year.
 - b. The total number of gallons of coating, cleaning, washoff and gluing cleanup materials employed in this emissions unit for the previous calendar year.

The reports shall be submitted by January 31 of each year.
- 4. If the facility (emissions units R001 - R004) has a rolling, 12 month record that exceeds 24.9 tons of VOC from combined operations associated with the manufacture of wood furniture, or wood furniture components, the permittee shall submit the following:
 - a. Within 30 days after the end of that rolling, 12-month period in which the exceedance occurred, a notification to the Hamilton County Department of Environmental Services that the VOC emission limit was exceeded .
 - b. Within three months after the end of that rolling, 12-month period in which the exceedance occurred, a compliance plan to the Hamilton County Department of Environmental Services to comply with the presumptive RACT standards specified within USEPA document EPA-453/R-96-007 " Control of Volatile Organic Compound Emissions from Wood Furniture Manufacturing Operations" (April 1996). Any divergence from the presumptive RACT standards and the model rule provided within that document shall be described at the time of the

submittal of the 3-month compliance plan. Compliance with the presumptive RACT standards is to be achieved within 12 months after the rolling, 12-month period exceedance, unless otherwise requested by the permittee and approved by USEPA as a revision to Ohio's state implementation plan for ozone.

c. Exceeding the 24.9 TPY VOC limit is a violation for each day of the last month of each 12 month period in which the 24.9 TPY limit is exceeded regardless of whether a compliance plan is submitted.

5. The permittee shall submit quarterly deviation (excursion) reports that identify any daily record showing that the dry filtration system was not in service when the emissions unit was in operation. The deviation reports shall be submitted in accordance with the General Terms and Conditions of this permit.

E. Testing Requirements

1. OAC rule 3745-21-10(B) shall be used to determine the VOC contents of the coatings, cleaning, washoff and gluing materials employed in this emissions unit. If, pursuant to 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating, cleaning, washoff or gluing material, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for the coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.
2. Compliance with the usage limitations cited in sections B.1 and B.2 shall be demonstrated by the record keeping in section C.2.
3. Compliance with the annual emission rate of 8.57 TPY VOC established under OAC rule 3745-31-05(A)(3) in term A.1 shall be demonstrated by the recordkeeping in term C.2.
4. Compliance with the HAP emission limits outlined in term A.2.b shall be demonstrated by the record keeping requirements in term C.1.
5. Compliance with the facility wide VOC emission limitation of 24.9 TPY VOC outlined in term A.2.a shall be demonstrated by the recordkeeping in term C.3.

F. Miscellaneous Requirements

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1- C.3, C.6-C.9, D, and E.
2. This Federally Enforceable Permit limits the potential emissions of organic compounds from the wood furniture finishing processes and associated cleaning, washoff and gluing processes located at this facility to no more than 24.9 TPY during any rolling, 12-month period. Should VOC emissions from the wood finishing processes and associated cleaning, washoff and gluing processes exceed 24.9 TPY during any rolling, 12-month period, this facility should notify the Hamilton County Department of Environmental Services within 30 days. See term D.4.