

Facility ID: 1431154049 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

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: 1431154049 Emissions Unit ID: K001 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>
paint spray booth	OAC rule 3745-31-05(A)(3) (PTI 14-04847)	12.3 lbs/hr of volatile organic compounds (VOC) 4.3 tons per year (TPY) of VOC
	40 CFR, Part 60, Subpart SS	See Section A.2 below. 0.90 kilogram of VOC/liter of applied coating solids, based on a monthly, volume-weighted average of the total mass of VOC emitted to the atmosphere per volume of applied coating solids
	OAC rule 3745-21-09(K)(1)	2.8 lbs of VOC/gallon, excluding water and exempt solvents, as applied, based on a daily, volume-weighted average

2. **Additional Terms and Conditions**
  - (a) The above hourly emission limitation is based on the emissions unit's potential to emit. Therefore, no hourly records are required to demonstrate compliance with this limit. The VOC content of each cleanup material employed in this emissions unit shall not exceed 6.7 pounds of VOC per gallon.

**B. Operational Restrictions**

1. The maximum annual coating usage for this emissions unit shall not exceed 1,850 gallons, excluding water and exempt solvents.
2. The maximum annual cleanup material usage for this emissions unit shall not exceed 500 gallons.

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. the name and identification number of each coating employed;
  - b. the VOC content, in pounds per gallon, of each coating (excluding water and exempt solvents), as applied;
  - c. the volume (excluding water and exempt solvents), in gallons, of each coating employed;
  - d. the total volume (excluding water and exempt solvents), in gallons, of all coatings employed;
  - e. the name and identification number of each cleanup material employed;
  - f. the VOC content, in pounds per gallon, of each cleanup material employed;
  - g. the volume, in gallons, of each cleanup material employed;
  - h. the total volume, in gallons, of all cleanup materials employed; and
  - i. the total VOC emissions from all coatings and cleanup materials, in pounds {the summation of [(b x c) for each coating + (f x g) for each cleanup material]};

2. Each month, the permittee shall determine the monthly, volume-weighted average of the total mass of VOCs emitted to the atmosphere per volume of applied coating solids, in kilograms per liter, calculated as follows: Calculate the mass of VOC consumed ( $M_o + M_d$ ) during the calendar month by the following equation:

$$M_o + M_d = [\text{summation of } (L_{ci} \times D_{ci} \times W_{oi}) \text{ for } i = 1, 2, \dots, n + \text{summation of } (L_{dj} \times D_{dj}) \text{ for } j = 1, 2, \dots, m]$$

where:

$M_o$  = the total VOC emissions, in kilograms, from all the coatings consumed, as received

$M_d$  = the total VOC emissions, in kilograms, from all the solvents added to the coatings

$L_{ci}$  = the total volume, in liters, of coating  $i$  consumed, as received

$L_{dj}$  = the total volume, in liters, of solvent  $j$  added to coatings

$D_{ci}$  = density of coating  $i$ , as received (kilograms per liter)

$D_{dj}$  = density of solvent  $j$  added to coatings (kilograms per liter)

$W_{oi}$  = the fraction, by weight, of the VOC in coating  $i$ , as received

$n$  = the number of different coatings used during the calendar month

$m$  = the number of different solvents added to coatings during the calendar month

Calculate the total volume of coatings solids used ( $L_s$ ) in the calendar month by the following equation:

$$L_s = \text{summation of } (L_{ci} \times V_{si}) \text{ for } i = 1, 2, \dots, n$$

where:

$L_s$  = the volume of all coatings solids consumed (liters)

$L_{ci}$  = the volume of coating  $i$  consumed, as received (liters)

$V_{si}$  = the fraction, by volume, of the solids in coating  $i$ , as received

$n$  = the number of different coatings used during the calendar month

Calculate the volume-weighted average mass of VOC consumed per unit volume of coating solids applied during the calendar month by the following equation:

$$G = (M_o + M_d) / (L_s \times T)$$

where:

$G$  = the volume-weighted average mass of VOC in coatings consumed in a calendar month per unit volume of applied coating solids (kilograms per liter)

$T$  = transfer efficiency (0.95)

3. The permittee shall collect and record the following information each calendar year for this emissions unit:
- the total number of gallons of all coatings employed, excluding water and exempt solvents (the summation of C.1.d for all coatings);
  - the total number of gallons of all cleanup materials employed, in tons (the summation of C.1.h for all cleanup materials); and
  - the total VOC emissions from all coatings and cleanup materials employed, in tons (the summation of C.1.i for the calendar year and divided by 2,000 lbs/ton).
4. The permit to install for this emissions unit 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. Ohio EPA's "Review of New Sources of Air Toxics Emissions" policy ("Air Toxics Policy") was applied for each pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Toluene  
 TLV (ug/m3): 188,400  
 Maximum Hourly Emission Rate (lbs/hr): 12.3  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 611.6  
 Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 4,486

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 Toxics Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxics Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in the "Air Toxics Policy" include the following:

- 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 permit to install 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.).

If the permittee determines that the "Air Toxics Policy" will be satisfied with the above changes, 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 final permit to install prior to the change.

The permittee shall collect and record the following information when it conducts evaluations to determine that the changed emissions unit will satisfy the "Air Toxics 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 Toxics 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 Toxics Policy" for the change.

**D. Reporting Requirements**

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any monthly record showing the use of noncomplying coatings or cleanup materials (i.e., for VOC content). The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days following the end of the calendar month.

2. The permittee shall submit annual reports that summarize the total VOC emissions, the total coating usage and the total cleanup material usage for the previous calendar year. These reports shall be submitted by January 31 of each year.

3. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 0.90 kilogram of VOC/liter of applied coating solids limit. If no exceedances occurred, a report stating so is still required.

The deviation reports shall be submitted in accordance with Paragraph 3 of the General Terms and Conditions of this permit.

**E. Testing Requirements**

1. Compliance with the VOC emission limitations, VOC content limitations, material usage restrictions and kilogram of VOC/liter of applied coating solids restriction specified in Sections A and B shall be determined in accordance with the following methods:

a. Emission Limitations: 2.8 pounds of VOC per gallon of coating (excluding water and exempt solvents), as applied; 6.7 pounds of VOC per gallon of cleanup material

Applicable Compliance Method: Compliance shall be based upon the record keeping requirements specified in Section C.1. In accordance with OAC rule 3745-21-04(B)(5), U.S. EPA Method 24 shall be used to determine the VOC content of the coatings. If, pursuant to Section 4.3 of Method 24, 40 CFR, Part 60, Appendix A, the permittee determines that Method 24 cannot be used for a particular coating, the permittee shall so notify the Administrator of the U.S. EPA and shall use formulation data for that coating to demonstrate compliance until the U.S. EPA provides alternative analytical procedures or alternative precision statements for Method 24. Formulation data or U.S. EPA Method 24 shall be used to determine the VOC content of any cleanup material.

b. Emission Limitation: 0.90 kg of VOC/liter of applied coating solids

Applicable Compliance Method: Compliance shall be based on the record keeping performed pursuant to Section C.2.

c. Material Usage Restrictions: 1,850 gallons/year of coatings; 500 gallons/year of cleanup materials

Applicable Compliance Method: Compliance with the annual material usage restrictions shall be determined by the record keeping performed pursuant to Section C.3.

d. Emission Limitation: 12.3 lbs/hour of VOC; 4.3 TPY of VOC

Applicable Compliance Method: The hourly VOC emission limitation was established by multiplying the maximum amount of coating (in gallons) employed in any one hour by the maximum VOC content (pounds/gallon) of that coating.

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission test performed in accordance with 40 CFR, Part 60, Appendix A, Methods 1 through 4, and 18 or 25.

Compliance with the annual VOC emission limitation shall be ensured if compliance is maintained with the material usage restrictions and the VOC content limitations of the coatings and cleanup materials employed.

**F. Miscellaneous Requirements**

1. None