

Facility ID: 1409010788 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: 1409010788 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>
K001-Miscellaneous metal parts paint spray booth	OAC rule 3745-31-05(A)(3) (PTI 14-05316)	<p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 3.5 pounds per hour (lbs/hr) excluding cleanup.</p> <p>Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 10.5 tons per year (TPY) including cleanup.</p> <p>See sections B.1 and B.2.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(U)(1)(c).</p>
	OAC rule 3745-21-09(U)(1)(c)	See term A.2.b.

2. **Additional Terms and Conditions**
 - (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the usage, VOC content, and emission limitations and compliance with Air Toxics Policy.
 - The VOC content of each coating material employed in this emissions unit shall not exceed 3.5 pounds per gallon, excluding water and exempt solvents.
 - The VOC content of each cleaning material employed in this emissions unit shall not exceed 7.3 pounds per gallon, as applied.
 - The hourly emission limitation outlined is based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limitation.

B. Operational Restrictions

1. The maximum annual coating usage for this emissions unit shall not exceed 4800 gallons excluding water and exempt solvents.
2. The maximum annual cleanup material usage for this emissions unit shall not exceed 576 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 and cleaning material employed. "Coating" means a protective, decorative, or functional material applied in a thin layer to a surface. "Cleaning material" means organic solvent used to remove coating materials from equipment used in manufacturing operations;
 - b. the volume, in gallons, of each coating and cleaning material employed;
 - c. the total volume, in gallons, of all coatings and cleaning material employed; and
 - d. the VOC content of each coating and cleaning material, in pounds of VOC per gallon, as applied.
 - e. the amount of VOC emitted for all coating and cleaning materials employed, in pounds per month (c x d);

2. The permit to install for this/these emissions unit(s) K001 was evaluated based on the actual materials and the design parameters of the emissions unit(s)' exhaust system, as specified by the permittee in the permit application. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
 - b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$
 - d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Toxic Contaminant: toluene
 TLV (ug/m3): 73720
 Maximum Hourly Emission Rate (lbs/hr): 3.5
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1047
 MAGLC (ug/m3): 1755.23

The permittee, has demonstrated that emissions of toluene from emissions unit(s) K001, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03 (F).

Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous modeled level(s), then the permittee shall apply for and obtain a final permit-to-install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
- b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03 (F);
- c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level

concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
3. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing the use of noncomplying coatings and/or cleaning materials (i.e VOC contents) emission limitation. 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 which summarize the following for this emissions unit:
 - a. The total VOC emissions from coatings and cleanup materials employed in this emissions unit for the previous calendar year.
 - b. The total number of gallons of coatings, excluding water and exempt solvents employed in this emissions unit for the previous calendar year.
 - c. The total number of gallons of cleanup materials employed in this emissions unit for the previous calendar year.

The reports shall be submitted by January 31 of each year.
3. The permittee shall submit annual reports to the appropriate Ohio EPA District Office or local air agency, documenting any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit(s) or the exhaust stack have been made, then the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 following the end of each calendar year.

E. Testing Requirements

1. Emission Limitation:

Volatile organic compound (VOC) emissions from this emissions unit shall not exceed 10.5 tons per year (TPY) including cleanup.

Applicable Compliance Method:

The emission limitation was calculated as follows:

$$(4800 \text{ gallons of coating/year} \times 3.5 \text{ lbs of VOC/gallon of coating}) + (576 \text{ gallons of cleanup material/year} \times 7.3 \text{ lbs of VOC/gallon of coating}) \times \text{ton}/2000 \text{ lbs} = 10.5 \text{ TPY of VOC.}$$

Compliance with the emission limitations of 10.5 TPY VOC shall be demonstrated by the recordkeeping requirements in section C.1.
2. Compliance with the material usage limitations specified in sections B.1 and B.2 shall be based upon the record keeping requirements specified in section C.1.
3. VOC Content Limitations:

The VOC content of each coating material employed in this emissions unit shall not exceed 3.5 pounds per gallon, excluding water and exempt solvents.

The VOC content of each cleaning material employed in this emissions unit shall not exceed 7.3 pounds per gallon, as applied.

Applicable Compliance Method:

USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) cleanup materials, respectively. If, pursuant to Method 24 as outlined in 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or cleanup material, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A."

F. Miscellaneous Requirements

1. None