

## **GENERAL PERMIT 3.12 TEMPLATE**

**MISC. METAL PARTS AND PRODUCTS COATING LINE SUBJECT TO OAC RULE 3745-21-09(U)(1) AND  
UNCONTROLLED VOC EMISSIONS >10 TPY**

### **B. Facility-Wide Terms and Conditions**

Note: The following are the terms and conditions for a General PTIO to be issued to a **non-Title V** facility

1. 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).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.
2. The Ohio EPA has determined that this facility may be subject to the requirements of a federal rule that the Ohio EPA does not have the delegated authority to implement. Specifically:
  - a) On January 9, 2008, U.S. EPA promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR Part 63, Subpart HHHHHH. Spray applications using coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) and paint stripping operations using methylene chloride must be operated in compliance with this federal rule; and/or
  - b) On July 23, 2008, U.S.EPA promulgated the NESHAP for Nine Metal Fabrication and Finishing Source Categories at Area Sources, 40 CFR Part 63, Subpart XXXXXX. Metal fabrication of finishing metals containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd) must be operated in compliance with this federal rule.

Although Ohio EPA has determined that one or both of these rules (also known as a GACT) may apply, at this time Ohio EPA does not have the authority to enforce this standard. Instead, U.S. EPA has the authority to enforce this standard. Please be advised that all requirements associated with these rules are in effect and are enforceable by U.S. EPA. For more information on the area source rules, please refer to the follow U.S. EPA website: <http://www.epa.gov/ttn/atw/area/arearules.html>.

## **C. Emissions Unit Terms and Conditions**

**1. K00X, Miscellaneous Metal Parts and Products Coating Line**

**Operations, Property and/or Equipment Description:**

Misc. metal parts and products coating line subject to OAC rule 3745-21-09(U)(1) and uncontrolled or restricted VOC emissions >10 TPY (GP 3.12)

a) 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. b)(1)c., b)(2)b., d)(7), d)(8) and e)(4)

(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.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T) and OAC rule 3745-31-05(A)	The emissions limitation specified by this rule for volatile organic compound (VOC) emissions is equivalent to the emissions limitation established pursuant to OAC rule 3745-21-09(U)(1).
b.	OAC rule 3745-31-05(A)(3), as effective 6/30/08	The requirements of this rule include compliance with the requirements of OAC rule 3745-17-11(C).  See b)(2)a. below.
c.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 6/30/08	The Best Available Technology (BAT) requirements under 3745-31-05(A)(3) do not apply to particulate emissions since the calculated annual emission rate is less than 10 tons/year taking into account the federally enforceable work practice requirements in OAC rule 3745-17-11(C).  See b)(2)b. below.
d.	OAC rule 3745-17-11(C)	See b)(2)c. and c)(1)-(2) below.
e.	OAC rule 3745-21-09(U)(1)	See b)(2)d. below.

(2) Additional Terms and Conditions

- a. This Best Available Technology (BAT) emission limit applies until U.S. EPA approves Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3)(a) (the less than 10 tons per year BAT exemption) into the Ohio State Implementation Plan (SIP).
- b. These requirements apply once U.S. EPA approves OAC paragraph 3745-31-05(A)(3)(a)(ii) (the less than 10 tons per year BAT exemption) as part of the Ohio SIP.
- c. This emissions unit is exempt from the particulate control requirements in OAC rule 3745-17-11(C) and c)(1)-(2) and d)(2)-(6) of this permit if the miscellaneous metal coating line meets any one of the following criteria:
  - i. surface coating processes that apply only dip coatings, roll coatings, flow coatings, or brush coatings; or
  - ii. surface coating processes (e.g., for sealers, adhesives, and deadeners) that employ airless spray and bead-type (extrusion) application methods.
- d. The VOC content of the coatings employed shall not exceed the following limitations, as applied:
  - i. 4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents, for a clear coating;
  - ii. 4.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, for a zinc rich primer coating;
  - iii. 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, for an extreme performance coating;
  - iv. 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any coating that is dried at temperatures not exceeding two hundred degrees Fahrenheit;
  - v. 4.3 pounds of VOC per gallon of coating, excluding water and exempt solvents, for the interior coating of a steel pail or drum;
  - vi. 3.5 pounds of VOC per gallon of coating, excluding water and exempt solvents, for the exterior coating of a steel pail or drum;
  - vii. 4.9 pounds of VOC per gallon of coating, excluding water and exempt solvents, for a glass adhesion body primer coating used for the installation of any glass windows during the assembly of automobiles and trucks;
  - viii. 6.2 pounds of VOC per gallon of coating, excluding water and exempt solvents, for a high performance architectural aluminum coating; or

- ix. 3.0 pounds of VOC per gallon of coating, excluding water and exempt solvents, for any coating that is not regulated under any of the eight categories listed above.

If a miscellaneous metal parts and products coating is subject to two or more of the VOC content limitations listed above the limit which is least restrictive shall apply.

c) Operational Restrictions

- (1) The permittee shall install and operate a dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- (2) In the event the particulate filter system is not operating in accordance with the manufacturer's recommendations, instructions, or operating manual, with any modifications deemed necessary by the permittee, the control device shall be expeditiously repaired or otherwise returned to these documented operating conditions.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee must collect and record the following information for the miscellaneous metal parts coating line to demonstrate compliance with the coating VOC content limitations, either by means of use of complying coatings (i.e., each coating used complies with the applicable emissions limitation, as applied), or by means of a daily volume-weighted average VOC content:

a. Compliant Coating Option. If selecting this option, the permittee must collect and record the following information each month:

- i. the name, identification number and type (for example, clear coat subject to OAC rule 3745-21-09(U)(1)(a)) of each coating applied and each cleaning material employed; and
- ii. the mass of VOC per volume of each coating, in pounds per gallon, excluding water and exempt solvents, as applied, calculated as follows for  $C_{VOC,2}$ :

$$C_{VOC,2} = (D_C)(W_{VOC}) / V_S + V_{VOC}$$

Where:

$D_C$  = the density of coating, in pounds of coating per gallon of coating;

$$W_{VOC} = W_{VM} - W_W - W_{ES};$$

$V_S$  = volume fraction of solids in coating, in gallons of solids per gallon of coating;

$$V_{VOC} = V_{VM} - V_W - V_{ES};$$

$W_{VM}$  = weight fraction of volatile matter in coating, in pound of volatile matter per pound of coating;

$W_W$  = weight fraction of water in coating, in pound of water per pound of coating;

$W_{ES}$  = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating;

$V_{VM}$  = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating;

$V_W$  = volume fraction of water in coating, in gallon of water per gallon of coating; and

$V_{ES}$  = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating.

If the permittee mixes compliant coatings, it is not necessary to record the VOC content of the resulting mixture; or

b. Daily Weighted Average Option. If selecting this option, the permittee must collect and record the following information each day:

i. the name, identification number and type (for example, clear coat subject to OAC rule 3745-21-09(U)(1)(a)) of each coating applied and each cleaning material employed;

ii. the mass of VOC per volume of coating (excluding water and exempt solvents) and the number of gallons (excluding water and exempt solvents) of each coating, as applied; and

iii. the daily volume-weighted average VOC content of all coatings, as applied, calculated in accordance with the equation specified in paragraph (B)(9) of OAC rule 3745-21-10 for  $C_{VOC,2}$ , as follows:

$$(C_{VOC,2})_A = \frac{\sum_{i=1}^n C_{VOC,2i} L_{Ci} (V_{Si} + V_{VOCi})}{\sum_{i=1}^n L_{Ci} (V_{Si} + V_{VOCi})}$$

Where:

$(C_{VOC,2})_A$  is the daily volume-weighted average VOC content of all coatings, as applied; and

$C_{VOC,2}$  is the VOC content in pounds of VOC per gallon of coating, excluding water and exempt solvents calculated as follows:

$$C_{VOC,2} = (D_C)(W_{VOC}) / V_S + V_{VOC};$$

$D_C$  = density of coating, in pounds of coating per gallon of coating;

$$W_{VOC} = W_{VM} - W_W - W_{ES};$$

$V_S$  = the volume fraction of solids in coating, in gallons of solids per gallon of coating;

$$V_{VOC} = V_{VM} - V_W - V_{ES};$$

$W_{VM}$  = weight fraction of volatile matter in coating, in pound of volatile matter per pound of coating;

$W_W$  = weight fraction of water in coating, in pound of water per pound of coating;

$W_{ES}$  = weight fraction of exempt solvent in coating, in pound of exempt solvent per pound of coating;

$V_{VM}$  = volume fraction of volatile matter in coating, in gallon of volatile matter per gallon of coating;

$V_W$  = volume fraction of water in coating, in gallon of water per gallon of coating;

$V_{ES}$  = volume fraction of exempt solvent in coating, in gallon of exempt solvent per gallon of coating;

$A$  = subscript denoting that the indicated VOC content is a weighted average of the coatings employed during time period "t";

$L_C$  = liquid volume of coating employed during time period "t", in gallons of coating;

$M_C$  = mass of coating employed during the time period "t", in pounds of coating;

$i$  = subscript denoting a specific coating employed during time period "t";

$n$  = total number of coatings employed during time period "t"; and

$t$  = time period specified for the weighted average VOC content is per day and not included in the calculation.

- (2) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the appropriate Ohio EPA district office or local air agency upon request.
- (3) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it 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.
- (4) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

- (5) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any 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 at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the appropriate Ohio EPA district office or local air agency upon request.

- (6) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit(s) was/were in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. 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.

- (7) If the maximum annual emissions of any toxic air contaminant, as defined in OAC rule 3745-114-01, exceed one ton per year, the following requirements apply:

- a. The permittee has confirmed that potential emissions of each toxic air contaminant from this emissions unit are less than the applicable maximum hourly emission rate listed in Appendix A of the Qualifying Criteria document for GP 3.12. The maximum hourly emission rate for each compound was established at less than eighty per cent of its maximum acceptable ground level concentration (MAGLC) as determined through toxic air contaminant modeling.
- b. New coating or cleanup materials shall not be employed in this emissions unit without evaluating each toxic air contaminant in accordance with Appendix A of the Qualifying Criteria document for GP 3.12.
- c. Other important changes that can affect the parameters/values used in determining compliance with the maximum hourly emission rate include, but are not limited to, the following:
  - i. 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;
  - ii. 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
  - iii. 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 by demonstrating that potential emissions of

each toxic air contaminant do not exceed its maximum hourly emission rate in Appendix A of the Qualifying Criteria document for GP 3.12, 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.

- d. Prior to making a "modification" as defined by OAC rule 3745-31-01, the permittee must evaluate any changes in the composition of the materials used or use of new materials that would cause the emissions of any toxic air contaminant to increase. The permittee must apply for an individual permit-to-install and operate if new or increased emissions of any toxic air contaminant no longer comply with the applicable maximum hourly emissions rate in Appendix A of the Qualifying Criteria document for GP 3.12.
  - e. The Director may consider any significant departure from the operations of the emissions unit that the permittee committed to in the Qualifying Criteria document to be a modification that results in greater emissions than the emissions rate modeled, and he/she may require the permittee to submit a permit application for the increased emissions.
  - f. The permittee shall maintain a record of any change made to a parameter or value used to evaluate emissions of toxic air contaminants to complete the Qualifying Criteria document for GP 3.12 to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F). The record shall include the date and reason(s) for the change and if the change would increase the maximum emissions rate of any toxic air contaminant or result in the emissions of a new toxic air contaminant.
- (8) If the maximum annual emissions of any toxic air contaminant, as defined in OAC rule 3745-114-01, do not exceed one ton per year, modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), is not necessary. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install and operate prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials or use of new materials that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit-to-install and operate.
- e) Reporting Requirements
- (1) The reports required by this permit may be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal; or they may be mailed as a hard copy to the appropriate district office or local air agency.
  - (2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA District Office or Local Air Agency by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.
  - (3) The permittee shall notify the Ohio EPA district office or local air agency in writing of any daily record showing use of noncomplying coatings or the daily volume-weighted average VOC content in excess of the applicable limitation. The notification shall include

a copy of such record and shall be sent to the appropriate Ohio EPA district office or local air agency within 30 days after the exceedance occurs for the compliant coating option or 45 days after the exceedance occurs for the daily volume-weighted average option.

- (4) If the maximum annual emissions of any toxic air contaminant, as defined in OAC rule 3745-114-01, exceed one ton per year, the permittee shall include any change made to a parameter or value used to evaluate emissions of toxic air contaminants to complete the Qualifying Criteria document for GP 3.12 to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), in the annual PER. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

- (1) Compliance with the emissions limitations and/or control requirements specified in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

Emissions Limitations:

The VOC content of the coatings employed shall not exceed the limitations listed in b)(2)d., as applied.

Applicable Compliance Method:

Compliance with the coating content limitation shall be demonstrated based on the recordkeeping requirements in d)(1) of this permit.

- (2) Formulation data or USEPA Method 24 shall be used to determine the organic compound contents of all coatings and cleaning materials.

g) Miscellaneous Requirements

- (1) None.