

Facility ID: 1431053228 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: 1431053228 Emissions Unit ID: K002 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>
K002-Thermal Spray Coating Line for Aluminum Deposition controlled with a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-05568)	The Particulate Emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.023 pound per hour.
		The Particulate Emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.099 ton per year.
		The Volatile Organic Compound (VOC) emissions from coatings shall not exceed 2.3 pounds per hour.
		The Volatile Organic Compound (VOC) emissions from coatings shall not exceed 10.1 tons per year.
		The acetone emissions from coatings and cleanup shall not exceed 26.4 pounds per day.
		The acetone emissions from coatings and cleanup shall not exceed 4.82 tons per year.
		See term A.2.b.
OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the fabric filter exhaust stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.	
	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	
	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-17-11(B).	
OAC rule 3745-17-11(B)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	
OAC rule 3745-21-09(U)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).	

2. Additional Terms and Conditions

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the emission limitations, opacity limitation, coating VOC content limitation, and acetone usage restriction. The maximum VOC content of the coating material employed in this emissions unit shall not exceed 2.3 pounds of VOC/gallon of coating. The hourly and annual emission limitations for the coating usage are based on the emission unit's Potential to Emit (PTE). Therefore, no records or reports are required to demonstrate compliance with these limitations.

B. Operational Restrictions

1. The maximum amount of acetone employed in this emissions unit shall not exceed 4 gallons/day.
- C. Monitoring and/or Record Keeping Requirements**
1. The permittee shall collect and record the following information for each month for the paint coating operation:
 - a. The company identification for each coating (paint) employed.
 - b. The number of gallons of each coating (paint) employed.
 - c. The volatile organic compound content of each coating (paint), in pounds per gallon.
 - d. The total volatile organic compound emission rate for all coating, in pounds per month (b x c).

[Note: The paint coating information must be for the paint coatings as employed, including any thinning solvents added at the emissions unit.]
 2. The permittee shall collect and record the following information for each day for the acetone usage:
 - a. The number of gallons of acetone employed.
 - b. The density of the acetone in pounds per gallon.
 - c. The total acetone emission rate, in pounds per day (a x b).
 3. The permit to install for emission unit K002 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 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 Ground-Level Concentration (MAGLC).

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

Pollutant: Xylene
 TLV (ug/m3): 434,000
 Maximum Hourly Emission Rate: 0.15 lb/hr
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 48
 MAGLC (ug/m3): 10,333

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.).

If the permittee determines that the "Air Toxic Policy" 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 the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final 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 still 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 the evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
 - c. where 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.
 4. The permittee shall maintain annual records of the volume, in gallons, of acetone employed in this emission unit by summarizing the acetone usage records at the end of the calendar year.
- D. Reporting Requirements**
1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any record showing that emissions unit K002 employed coatings that exceeded the applicable maximum VOC content limit outlined in T&Cs A.2.b or exceeded the acetone usage limit in term B.1. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 30 days after the end of the month in which the exceedance(s) occurred.

2. The permittee shall submit annual reports which summarize the following for this emissions unit:
 - a. The total VOC emissions from coatings employed in this emissions unit for the previous calendar year.
 - b. The total number of gallons of acetone employed in this emissions unit for the previous calendar year.

The reports shall be submitted by January 31 of each year to the Hamilton County Department of Environmental Services.

E. Testing Requirements

1. Compliance with the emission limitations in term A.1 of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

The Particulate Emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.023 pound per hour (lbs/hr).

Applicable Compliance Method:

The emission limitation was developed using the following equation:

$$2.9 \text{ lbs of aluminum/part} \times 5 \text{ parts/hour} \times (1-.69) \times (1-.995) = 0.023 \text{ lb of PE/PM10/hr.}$$

In the above equation the transfer efficiency is 69% and 99.5% is the control efficiency of the fabric filter.

All PE is assumed to be PM10.

If required, the permittee shall determine compliance with the PE/PM10 emission limitations in accordance with the Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Emission Limitation:

The Particulate Emissions (PE) and Particulate matter less than 10 microns in diameter (PM10) shall not exceed 0.099 ton per year.

Applicable Compliance Method:

The emission limitation was developed using the following equation:

$$2.9 \text{ lbs of aluminum/part} \times 5 \text{ parts/hour} \times (1-.69) \times (1-.995) \times 24 \text{ hours/day} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ lbs} = 0.099 \text{ ton per year of PE/PM10.}$$

In the above equation the transfer efficiency is 69% and 99.5% is the control efficiency of the fabric filter.

All PE is assumed to be PM10.

Emission Limitations:

The Volatile Organic Compound (VOC) emissions from coatings shall not exceed 2.3 lbs/hr from coatings.

Applicable Compliance Method:

The emission limitation was developed using the following equation:

$$1 \text{ gallon/hour (maximum hourly coating usage)} \times 2.3 \text{ pounds of VOC per gallon (maximum VOC content).}$$

Compliance with the VOC emissions limitations shall be determined by the record keeping requirements specified in term C.1.

Emission Limitations:

The Volatile Organic Compound (VOC) emissions from coatings shall not exceed 10.1 TPY from coatings.

Applicable Compliance Method:

The emission limitation was developed using the following equation:

$$1 \text{ gallon/hour (maximum hourly coating usage)} \times 2.3 \text{ pounds of VOC per gallon (maximum VOC content)} \times 24 \text{ hours/day} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ lbs} = 10.1 \text{ tons/year.}$$

Compliance with the VOC emission limitations shall be determined by the record keeping requirements specified in term C.1.

Emission Limitations:

The acetone emissions from coatings and cleanup shall not exceed 26.4 lbs of acetone/day.

Applicable Compliance Method:

Compliance with the hourly acetone emission limitation shall be determined by the record keeping requirements specified in term C.2.

Emission Limitations:

The acetone emissions from coatings and cleanup shall not exceed 4.82 TPY of acetone.

Applicable Compliance Method:

Compliance with the hourly acetone emission limitation shall be determined by the record keeping requirements specified in term C.4.

Material Usage Restrictions:

The maximum amount of acetone employed in this emissions unit shall not exceed 4 gallons/day.

Applicable Compliance Method:

Compliance with the daily acetone usage restriction shall be determined by the record keeping requirements specified in term C.2.

2. Emission Limitation:

Visible particulate emissions from the fabric filter exhaust stack shall not exceed 10 percent opacity, as a six-minute average, except as specified by rule.

Applicable Compliance Method:

Compliance shall be determined through visible emission observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

F. **Miscellaneous Requirements**

1. None