

Facility ID: 1483040399 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: 1483040399 Emissions Unit ID: F002 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>
core making and mold making, sand/binder mixing, and mold release	OAC rule 3745-31-05(A)(3) (PTI 14-04394)	15.18 lbs/hr OC, 4.65 TPY OC 8.29 lbs/hr PM, 2.44 TPY PM 7.46 lbs/hr PM10, 2.20 TPY PM10

See A.2.

OAC rule 3745-17-07(B)(1)
Visible fugitive particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.

2. Additional Terms and Conditions

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, compliance with the annual usage limit and production limit and enclosure of the emissions unit within the building.
The organic compound (OC) content of any mold release material employed in emissions unit F002 shall not exceed 95% by weight (0.95 lb OC/lb mold release material).
Emissions unit F002 currently employs non- photochemically reactive materials and non-photochemically reactive resin binding systems as defined in OAC rule 3745-21-01(C)(5). It is therefore exempt from all emission limitations and control requirements contained in OAC rule 3745-21-07(G).

Prior to employing any photochemically reactive material or photochemically reactive resin binding system in this emissions unit, the permittee shall provide written notification to the Hamilton County Department of Environmental Services. Such notification shall include information sufficient to determine compliance with the emission limits and/or control requirements specified in OAC rule 3745-21-07(G). This notification, at a minimum, shall include the company identification of the new material to be employed, the solvent composition of the material, and the maximum amount to be used, in pounds per hour, and pounds per day.

The hourly emission limitation outlined in section A.1. is based upon the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limit.

B. Operational Restrictions

1. The maximum annual sand production rate for emissions unit F002 shall not exceed 7500 tons per year.
2. The maximum annual mold release material usage in emissions unit F002 shall not exceed 540 pounds per year.
3. The use of a photochemically reactive mold release material as defined in OAC rule 3745-21-01(C)(5) is prohibited in emissions unit F002.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for emissions unit F002:
 - a. the name and identification of the mold release material employed;
 - b. the quantity of mold release material employed, in pounds;
 - c. the organic compound (OC) content of mold release material employed, in percent (%) by weight (lb OC/lb mold release);
 - d. the OC emissions from the mold release material, in tons (b*c above divided by 2000);
 - e. the quantity of sand produced in emissions unit F002, in tons; and
 - f. the particulate matter (PM) emissions from emissions unit F002, in tons.

2. The permittee shall collect and record the following information each month for emissions unit F002:
 - a. the company identification of each liquid organic material employed in this emissions unit; and
 - b. a record of each liquid organic material employed in this emissions unit indicating whether or not the liquid organic material is photochemically reactive as identified in OAC rule 3745-21-01(C)(5).
3. The permit to install for this emissions unit (F002) 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: isopropanol

TLV (ug/m3): 983067

Maximum Hourly Emission Rate (lbs/hr): 15.18

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 10360

MAGLC (ug/m3): 23406

Physical changes to or in the method of operation of the emissions unit after it's 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 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 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 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 it's 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.

D. Reporting Requirements

1. The permittee shall submit annual deviation (excursion) reports which identify all exceedances of the annual sand production rate limit and/or the annual mold release material usage limit for emissions unit F002. The reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 of each year and shall cover the previous calendar year. If no deviations occurred, the permittee shall state so in the report.
2. The permittee shall submit annual reports which identify the actual annual OC emissions from emissions unit F002. The reports shall be submitted to the Hamilton County Department of Environmental Services by January 31 of each year and shall cover the previous calendar year.
3. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the mold release material OC content limit for emissions unit F002. The reports shall be submitted to the Hamilton County Department of Environmental Services by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter (October through December, January through March, April through June, and July through September, respectively. If no deviations occurred, the permittee shall state so in the report.
4. The permittee shall submit annual reports which identify each day during which any photochemically reactive material was employed in this emissions unit. This report shall identify the cause for the use of the photochemically reactive materials and the estimated total quantity of materials emitted each such day. This report shall be submitted to the Hamilton County Department of Environmental Services by January 31 of each year and shall cover the previous calendar year.

E. Testing Requirements

1. Compliance with the fugitive visible particulate emissions limits in section A.1. shall be demonstrated by the methods outlined in 40 CFR 60, Appendix A, Method 9.
 2. Emissions Limit

8.29 lbs/hr PM

Compliance with the emissions limits in section A.1. for F002 shall be demonstrated by the following equations using the emission factors from chapter 2.8 of RACM:

 - a. core making and resin mold making actual sand usage (tons/hr) X RACM emission factor (0.35 lb PM/ton) = lbs/hr PM; and
 - b. sand and binder mixing (small mixer, cast mixer, large mixer) actual sand usage (tons/hr) X RACM emission factor (0.3 lb PM/ton) = lbs/hr PM
 3. Emissions Limit

2.44 TPY PM

Compliance with the TPY PM emissions limit in section A.1. for F002 shall be demonstrated by the following equations using the emission factors from chapter 2.8 of RACM:

 - a. core and mold making actual sand usage (tons/yr) X RACM emission factor (0.35 lb PM/ton) X ton/2000 lbs = TPY PM; and
 - b. sand and binder mixing actual sand usage (tons/yr) X RACM emission factor (0.3 lb PM/ton) X ton/2000 lbs = TPY PM
 4. Emissions Limits

7.46 lbs/hr PM10
2.20 TPY PM10

Compliance with the lbs/hr and TPY PM10 emissions limits in section A.1. for F002 shall be demonstrated by taking 90% of the PM emission summations to calculate the PM10 emissions based on an estimate from AP-42, Appendix B.1., Steel Foundries.
 5. Emissions Limits

15.18 lbs/hr OC
4.65 TPY OC

Compliance with the lbs/hr and TPY OC emissions limits in section A.1. for F002 shall be demonstrated by the summation of the sand/binder mixing emissions and core making mold release emissions. The permittee shall use the emission factor from the Ohio EPA/OCMA Memorandum of Understanding dated 02/16/98:

 - a. sand/binder mixing and core/mold making actual sand usage (tons/hr) X OCMA emission factor (1.17 lb OC/ton) = lbs/hr OC;
 - b. sand binder mixing and core/mold making actual sand usage (tons/yr) X OCMA emission factor (1.17 lb OC/ton) X ton/2000 lbs = TPY OC.

The permittee shall calculate the OC emissions from the core making mold release as required in section C.1. The permittee shall calculate the TPY OC emissions from the core making mold release using the weight percent of OC from each mold release material (MSDS) in the following equation:

 - a. mold release actual usage of mold release (lbs/yr) X weight percent OC (lbs OC/lb mold release) X ton/2000 lbs = TPY OC.
- F. Miscellaneous Requirements**
1. None