

Facility ID: 0575010009 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: 0575010009 Emissions Unit ID: P037 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>
P037 - Small Loop (Production of phenolic urethane no-bake sand cores and Molds) w/ particulate control equipment	OAC rule 3745-31-05(A)(3) & PTI 05-10789	Particulate emissions shall not exceed 0.09 lbs of PE/hr, nor 0.37 tons year
		Volatile Organic Compound (VOC) emissions shall not exceed 5.85 lbs/hr nor 11.7 tons per year
		Visible particulate emissions from this emissions unit shall not exceed 5% opacity as a 3-minute average from the fugitive dust source
	OAC rule 3745-17-07(B)(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)
	OAC rule 3745-17-08(B)(3)(b)	See A.2.a
	OAC rule 3745-21-07(G)(9)(i)	See A.2.b

2. Additional Terms and Conditions

- (a) This emissions unit shall employ reasonably available control measures to minimize or eliminate visible particulate emissions of fugitive dust. This emissions unit is exempt from the requirements of OAC rule 3745-21-07(G) while employing a phenolic urethane no-bake resin binder for foundry core-making and mold-making operations. The emissions limitation of 5.6 pounds per hour of VOC is based upon the maximum potential of this emissions unit. Therefore, it is not necessary to establish recordkeeping and reporting requirements to ensure compliance with this limitation. The emissions limitation of 0.09 pounds per hour of particulate emissions is based upon the maximum potential of this emissions unit. Therefore, it is not necessary to establish recordkeeping and reporting requirements to ensure compliance with this limitation. This emissions unit shall be equipped with a capture and control particulate filter system that reduces the particulate emissions by at least 99%.

B. Operational Restrictions

1. This emission unit shall only be employed as a phenolic urethane no-bake resin binder system for foundry core-making and mold-making operations as described in OAC rule 3745-21-07(G)(9)(i)
2. The maximum amount of binder(s) that this emissions unit may employ on an annual basis shall not exceed 244 tons.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall perform daily checks, when this emissions unit is in operation, for any particulate emissions from building exhaust points (i.e. roof vents, bay doors, etc.). If visible emissions are observed, the permittee shall record the date and the corrective actions taken to eliminate the visible emissions.
2. The permittee shall maintain annual records identifying the amount of binder(s) employed in this emissions unit.

D. Reporting Requirements

1. The permittee shall submit annual reports which identify all days when visible particulate emissions exceeding 5 percent opacity as a 3-minute average were observed, as well as the corrective actions that were taken to

achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occurred during the year, then the permittee is not required to submit a report.

2. The permittee shall submit annual reports which identify any exceedances of the binder usage limitation, as well as the corrective actions that were taken to achieve compliance. These reports shall be submitted by January 31 of each year. If no exceedances occur during the year, then the permittee is not required to submit a report.

E. Testing Requirements

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

Emissions Limitation :
0.09 pound of particulate emissions per hour

Applicable Compliance Method:

$$HER=(AF)(GR)(TC)(1-0.99)(lb./7,006 \text{ gr})$$

where:

HER= hourly emission rate;
AF = air consumption per cycle, (72 cu. ft./cycle);
GR = grain concentration per cubic foot, (50 grain/cu. ft);
TC = total cycles per hour, (16.6); and
CE =air pollution control device efficiency: 99.0%
Emissions Limitation :
0.37 ton of particulate emissions per year

Applicable Compliance Method:

$$AER= (AF)(GR)(TC)(1-0.99)(OH)(lb./7,006 \text{ gr})(\text{ton}/2,000 \text{ lbs.})$$

where:

AER= annual emission rate;
AF = air consumption per cycle, (72 cu. ft./cycle);
GR = grain concentration per cubic foot, (50 grain/cu. ft);
TC = total cycles per hour, (16.6);
CE = air pollution control device efficiency: 99.0%; and
OH = annual operating hours
Emissions Limitation :

Applicable Compliance Method:
5.85 lbs of VOC /hr

$$HER= (TS)(EF)$$

where:

HER= hourly emission rate;
TS =total tons of sand per hour, (5 tons sand/hour); and
EF =emissions factor from "Technical and Economic Feasibility Study for Control of VOCs from Phenolic Urethane Cold Box and No Bake Core- and Mold- Making Operations in Foundries" prepared by RMT, Inc, (1.17 lbs VOC/ton sand).
Emissions Limitation :
11.7 tons of volatile organic compounds per year

Applicable Compliance Method:

$$AER= (TB)(EF)$$

where:

AER= annual emission rate;
TB =total tons of binder(s) per year, (244 TPY); and
EF =emissions factor from "Technical and Economic Feasibility Study for Control of VOCs from Phenolic Urethane Cold Box and No Bake Core- and Mold- Making Operations in Foundries" prepared by RMT, Inc. (24.4 lbs of binder represents a ratio of 1.22 lbs binder applied per 100 lbs sand to 1.17 lbs VOC emitted per 2,000 lbs sand),(1.17 lbs VOC / 24.4 lbs binder applied to the sand).
Emission Limitation:
Visible emissions of fugitive dust shall not exceed 5% opacity, as a 3-minute average

Applicable Compliance Method:

Compliance shall be based upon visible emission evaluations performed in accordance with OAC rule 3745-17-03(B)(3) using the methods and procedures specified in USEPA Reference Method 9.

F. Miscellaneous Requirements

1. None