

Facility ID: 1431431877 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.

[Go to Part II for Emissions Unit P030](#)  
[Go to Part II for Emissions Unit P031](#)  
[Go to Part II for Emissions Unit P032](#)

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Facility ID: 1431431877 Emissions Unit ID: P030 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>
P030 - 700 gallon reactor controlled by fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-05651)	Organic compound (OC) emissions from the reactor shall not exceed 57.6 pounds per day and 10.5 tons per year.
		Particulate emissions* (PE) from the reactor shall not exceed 5.9 pounds per day and 1.08 ton per year.
		* PE = Particulate Matter 10 microns in diameter and less (PM10).
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1), 3745-17-08(B), and 3745-31-05(C).
		See term and condition A.2.b.
	OAC rule 3745-31-05(C)	See term and condition A.2.e.
	OAC rule 3745-17-07(B)(1)	See term and condition A.2.c.
	OAC rule 3745-17-08(B)	The permittee shall minimize or eliminate visible particulate emissions by the use of a cover and dust collector.
	OAC rule 3745-17-07(A)	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 3745-17-11(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).

**2. Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, opacity limitation, and use of covers and a fabric filter. Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average. Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule. The daily emissions limitations outlined in Section A.1 are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P006 (Shar Mixer), P007 (Hockmeyer Mixer 1), P008 (Hockmeyer Mixer 2), P010 (Hockmeyer HV-15 Mixer), P011 (Cowles Mixer), P013 (Epoxy Mixer), P017 (Hardener Tank), P021 (Tinting Area) P022 (Granule Mixer), P025 (Solvent Reclaim Still), P026 (Schold Mixer1), P027 (Schold Mixer 2), P028 (Myers Mixer), P029 (1,200 gallon epoxy clear base mixer), P030 (700 gallon reactor), P031 (300 gallon reactor), P032 (2,500 gallon reactor), T001 (6,134

gallon storage tank #1), T002 (5,086 gallon storage tank #2), T003 (5,086 gallon storage tank #3), T004 (6,000 gallon storage tank #4), T005 (6,000 gallon storage tank #5) and T006 (6,134 gallon storage tank #6) including any de minimus air contaminant sources as defined in OAC rule 3745-15-05, and any permanent exemption air contaminant sources installed subsequent to the issuance of this permit shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

**B. Operational Restrictions**

1. None

**C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information for this emissions unit on a monthly basis:
- The name and identification of each batch of coating produced.
  - The OC content of each batch of coating, in pounds per gallon.
  - The total amount of all organic material used in each batch, in pounds.
  - The total combined amount of all organic material used during the month for all batches, in pounds.
  - The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:  
  
The summation of [(d) x 1.5 percent/2000] for each liquid organic material used in the formulation of coatings.  
  
These records shall be summarized at the end of each calendar year.
2. The permittee shall collect and record the following information each month for emissions units described in term A.2.e:
- The name and identification number of each batch of coating produced containing a HAP(s).
  - The number of pounds of each batch of coating produced.
  - The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of coating produced in pounds of individual HAP per pound of coating.
  - The total combined HAP content of each coating in pounds of combined HAPs per pound of coating [sum all the individual HAP contents from (c)].
  - The total individual HAP emissions for each HAP from all coatings produced in pounds or tons per month [for each individual HAP, the summation of (b) x 1.5 percent x (c)].
  - The total combined HAP emissions from all coatings produced in pounds or tons per month [the summation of (b) x 1.5 percent x (d)].
  - The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.
  - The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.
- A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.
3. The permittee shall maintain readily available, annual records on-site which specify the OC emissions from this emissions unit. These records shall be prepared by January 30 of each year and cover the previous calendar year.
4. The permit to install for this emissions unit (P030) 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 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 (lbs/hr): 1.53

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,167

MAGLC (ug/m3): 10,333

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, 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) is (are) defined as a modification under other provisions of the modification definition, 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 its 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 reports which specify the total organic compound emissions from this emissions unit. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month HAPs emissions limitations in term and condition A.2.e. If no deviations occurred during the reporting period, the permittee shall state so in the report.
3. All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General terms and conditions of this permit.

**E. Testing Requirements**

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

**a. Emission Limitations:**

Organic compound (OC) emissions from the reactor shall not exceed 57.6 pounds per day and 10.5 tons per year.

**Applicable Compliance Methods:**

The daily OC emission rate is based on the emissions unit's potential to emit (PTE). The PTE for OCs is achieved by manufacturing polyurethane. The potential to emit was calculated by the following equation:  
 $3840 \text{ pounds of solvent employed/day} \times 0.015 \text{ pounds of solvent emitted/lbs of solvent employed} = 57.6 \text{ pounds of OC/day.}$

$57.6 \text{ pounds of OC/day} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ pounds} = 10.5 \text{ TPY}$

Compliance with the annual organic compound emission limitation in term and condition A.1 shall be based upon the record keeping requirements as specified in term and condition C.1 and C.3.

**b. Emission Limitations:**

Particulate emissions\* (PE) from the reactor shall not exceed 5.9 pounds per day and 1.08 tons per year.

\* PE = Particulate Matter 10 microns in diameter and less.

**Applicable Compliance Method:**

The daily and annual PE-PM10 emission rate is based on the emissions unit's PTE. The PTE for PE is achieved by manufacturing epoxy. The potential to emit was calculated by adding fugitive PE to stack PE using the following equations:

$9850 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/ pound of dry material} \times 0.05 \text{ pound of fugitive of PE/pound of PE entrained} = 4.925 \text{ pounds of fugitive PE/day.}$

$9850 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/ pound of dry material} \times 0.95 \text{ pound of PE captured/pound of PE entrained} \times (1-.99^*) = 0.936 \text{ pound of stack PE/day.}$

\* control efficiency of fabric filter

$4.925 \text{ pounds of fugitive PE/day} + 0.936 \text{ pound of stack PE/day} = 5.9 \text{ pounds per day of PE.}$

$5.9 \text{ pounds per day of PE} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ pounds} = 1.08 \text{ TPY}$

c. Emission Limitation:

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

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).

d. Emission Limitation:

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the 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)(3).

e. Emissions Limitations:

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs.

Applicable Compliance Method:

Compliance with the HAP emission limitations in term and condition A.2.e will be determined by the record keeping requirements specified in term and condition C.2.

F. **Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.3, D, and E.

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Facility ID: 1431431877 Emissions Unit ID: P031 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>
P031 - 300 gallon reactor controlled by fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-05651)	Organic compound (OC) emissions from the reactor shall not exceed 24 pounds per day and 4.5 tons per year.  Particulate emissions* (PE) from the reactor shall not exceed 2.5 pounds per day and 0.46 ton per year.  * PE = Particulate Matter 10 microns in diameter and less (PM10).  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1), 3745-17-08(B), and 3745-3105(C).
	OAC rule 3745-31-05(C)	See term and condition A.2.b.
	OAC rule 3745-17-07(B)(1)	See term and condition A.2.e.
	OAC rule 3745-17-08(B)	See term and condition A.2.c.
	OAC rule 3745-17-07(A)	The permittee shall minimize or eliminate visible particulate emissions by the use of a cover and dust collector.  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 3745-17-11(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).

2. **Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, opacity limitation, and use of covers and a fabric filter.  
Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six-minute average.  
Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.  
The daily emissions limitations outlined in Section A.1 are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits.  
The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P006 (Shar Mixer), P007 (Hockmeyer Mixer 1), P008 (Hockmeyer Mixer 2), P010 (Hockmeyer HV-15 Mixer), P011 (Cowles Mixer), P013 (Epoxy Mixer), P017 (Hardener Tank), P021 (Tinting Area) P022 (Granule Mixer), P025 (Solvent Reclaim Still), P026 (Schold Mixer1), P027 (Schold Mixer 2), P028 (Myers Mixer), P029 (1,200 gallon epoxy clear base mixer), P030 (700 gallon reactor), P031 (300 gallon reactor), P032 (2,500 gallon reactor), T001 (6,134 gallon storage tank #1), T002 (5,086 gallon storage tank #2), T003 (5,086 gallon storage tank #3), T004 (6,000 gallon storage tank #4), T005 (6,000 gallon storage tank #5) and T006 (6,134 gallon storage tank #6) including any de minimus air contaminant sources as defined in OAC rule 3745-15-05, and any permanent exemption air contaminant sources installed subsequent to the issuance of this permit shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

B. **Operational Restrictions**

1. None

C. **Monitoring and/or Record Keeping Requirements**

1. The permittee shall collect and record the following information for this emissions unit on a monthly basis:
- The name and identification of each batch of coating produced.
  - The OC content of each batch of coating, in pounds per gallon.
  - The total amount of all organic material used in each batch, in pounds.
  - The total combined amount of all organic material used during the month for all batches, in pounds.
  - The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:  
  
The summation of [(d) x 1.5 percent/2000] for each liquid organic material used in the formulation of coatings.  
  
These records shall be summarized at the end of each calendar year.
2. The permittee shall collect and record the following information each month for emission units described in term A.2.e:
- The name and identification number of each batch of coating produced containing a HAP(s).
  - The number of pounds of each batch of coating produced.
  - The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of coating produced in pounds of individual HAP per pound of coating.
  - The total combined HAP content of each coating in pounds of combined HAPs per pound of coating [sum all the individual HAP contents from (c)].
  - The total individual HAP emissions for each HAP from all coatings produced in pounds or tons per month [for each individual HAP, the summation of (b) x 1.5 percent x (c)].
  - The total combined HAP emissions from all coatings produced in pounds or tons per month [the summation of (b) x 1.5 percent x (d)].
  - The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.
  - The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.
- A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.
3. The permittee shall maintain readily available, annual records on-site which specify the OC emissions from this emissions unit. These records shall be prepared by January 30 of each year and cover the previous calendar year.
4. The permit to install for this emissions unit (P031) 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 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 (lbs/hr): 1.53

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,167

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, 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) is (are) defined as a modification under other provisions of the modification definition, 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 its 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 reports which specify the total organic compound emissions from this emissions unit. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 30 of each year and cover the previous calendar year.
2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month HAPs emissions limitations in term and condition A.2.e. If no deviations occurred during the reporting period, the permittee shall state so in the report.
3. All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General terms and conditions of this permit.

#### E. Testing Requirements

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

a. Emission Limitations:  
Organic compound (OC) emissions from the reactor shall not exceed 24 pounds per day and 4.5 tons per year.

Applicable Compliance Methods:

The daily OC emission rate is based on the emissions unit's potential to emit (PTE). The PTE for OCs is achieved by manufacturing polyurethane. The potential to emit was calculated by the following equation:  
1600 pounds of solvent employed/day x 0.015 pounds of solvent emitted/lbs of solvent employed = 24 pounds OC/day.

24 pounds of OC/day x 365 days/year x ton/2000 pounds = 4.38 TPY

Compliance with the annual organic compound emission limitation in term and condition A.1. shall be based upon the record keeping requirements as specified in term and condition C.1 and C.3.

b. Emission Limitations:  
Particulate emissions\* (PE) from the reactor shall not exceed 2.5 pounds per day and 0.46 ton per year.

\* PE = Particulate Matter 10 microns in diameter and less.

**Applicable Compliance Methods:**

The daily and annual PE-PM10 emission rate is based on the emissions unit's PTE. The PTE for PE is achieved by manufacturing epoxy. The potential to emit was calculated by adding fugitive PE to stack PE using the following equations:

$4200 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/pound of dry material} \times 0.05 \text{ pound of fugitive PE/pound of PE entrained} = 2.1 \text{ pounds of fugitive PE/day.}$

$4200 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/pound of dry material} \times 0.95 \text{ pound of PE captured/pound of PE entrained} \times (1-.99^*) = 0.399 \text{ pound of stack PE/day.}$

\* control efficiency of fabric filter.

$2.1 \text{ pounds of fugitive PE/day} + 0.399 \text{ pound of stack PE/day} = 2.499 \text{ pounds per day of PE.}$

$2.499 \text{ pounds per day of PE} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ pounds} = 0.46 \text{ TPY}$

**c. Emission Limitation:**

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

**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).

**d. Emission Limitation:**

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the 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)(3).

**e. Emissions Limitations:**

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs.

**Applicable Compliance Method:**

Compliance with the HAP emission limitations in term and condition A.2.e will be determined by the record keeping requirements specified in term and condition C.2.

**F. Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.3, D, and E.

\*\*\*THIS IS NOT AN OFFICIAL VERSION OF THE PERMIT. SEE PAGE 1 FOR ADDITIONAL INFORMATION\*\*\*

**Facility ID: 1431431877 Emissions Unit ID: P032 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>
P032 - 2500 gallon reactor controlled by a fabric filter	OAC rule 3745-31-05(A)(3) (PTI 14-05651)	Organic compound (OC) emissions from the reactor shall not exceed 108 pounds per day and 19.8 tons per year.  Particulate emissions* (PE) from the reactor shall not exceed 14.5 20.8 pounds per day and 2.65 3.8 ton per

year.

\* PE = Particulate Matter 10 microns in diameter and less (PM10)

The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(B)(1), 3745-17-08, and 3745-31-05(C).

See terms and conditions A.2.b. and B.1.

OAC rule 3745-31-05(C)

See term and condition A.2.e

OAC rule 3745-17-07(B)(1)

See term and condition A.2.c.

OAC rule 3745-17-08(B)

The permittee shall minimize or eliminate visible particulate emissions by the use of a cover and dust collector.

OAC rule 3745-17-07(A)

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 3745-17-11(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).

**2. Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emissions limitations, opacity limitation, production limitation and use of covers and a fabric filter. Visible particulate emissions from any stack shall not exceed 10 percent opacity, as a six- minute average. Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule. The daily PM-PM10 emissions limitations outlined in Section A.1 are based upon the emissions unit's Potential to Emit (PTE). Therefore, no records are required to demonstrate compliance with these limits. The actual emissions of Hazardous Air Pollutants (HAPs), as identified in Section 112(b) of Title III of the Clean Air Act from emissions units P006 (Shar Mixer), P007 (Hockmeyer Mixer 1), P008 (Hockmeyer Mixer 2), P010 (Hockmeyer HV-15 Mixer), P011 (Cowles Mixer), P013 (Epoxy Mixer), P017 (Hardener Tank), P021 (Tinting Area) P022 (Granule Mixer), P025 (Solvent Reclaim Still), P026 (Schold Mixer1), P027 (Schold Mixer 2), P028 (Myers Mixer), P029 (1,200 gallon epoxy clear base mixer), P030 (700 gallon reactor), P031 (300 gallon reactor), P032 (2,500 gallon reactor), T001 (6,134 gallon storage tank #1), T002 (5,086 gallon storage tank #2), T003 (5,086 gallon storage tank #3), T004 (6,000 gallon storage tank #4), T005 (6,000 gallon storage tank #5) and T006 (6,134 gallon storage tank #6) including any de minimus air contaminant sources as defined in OAC rule 3745-15-05, and any permanent exemption air contaminant sources installed subsequent to the issuance of this permit shall not exceed 9.9 TPY for any single HAP and 24.9 TPY for any combination of HAPs. Compliance with the above limitations shall be based on a rolling, 12-month summation.

**B. Operational Restrictions**

- 1. The maximum daily production rate of polyurethane in this emission unit shall not exceed 2500 gallons per day.

**C. Monitoring and/or Record Keeping Requirements**

- 1. The permittee shall collect and record the following information for this emissions unit on a daily basis:
  - a. The name, identification and quantity, in gallons, of each batch of coating produced.
  - b. The OC content of each batch of coating, in pounds per gallon.
  - c. The total amount of all organic material used in each batch, in pounds.
  - d. The total combined amount of all organic material used during the day for all batches, in pounds.
  - e. The total combined monthly OC emissions, in tons per month. This calculation shall be based on the following equation:  
  
 The summation of [(d) x 1.5 percent/2000] for each liquid organic material used in the formulation of coatings.  
  
 These records shall be summarized at the end of each calendar year.
- 2. The permittee shall collect and record the following information each month for emission units described in term A.2.e:
  - a. The name and identification number of each batch of coating produced containing a HAP(s).
  - b. The number of pounds of each batch of coating produced.
  - c. The individual Hazardous Air Pollutant (HAP) content for each HAP per pound of coating produced in pounds of individual HAP per pound of coating.
  - d. The total combined HAP content of each coating in pounds of combined HAPs per pound of coating [sum all the individual HAP contents from (c)].
  - e. The total individual HAP emissions for each HAP from all coatings produced in pounds or tons per month [for each individual HAP, the summation of (b) x 1.5 percent x (c)].

f. The total combined HAP emissions from all coatings produced in pounds or tons per month [the summation of (b) x 1.5 percent x (d)].

g. The updated rolling, 12-month summation for individual HAP emissions for each HAP, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.

h. The updated rolling, 12-month summation for total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months. The summations shall also include the HAP emissions from emissions units T001 - T006.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting your Hamilton County Department of Environmental Services contact. This information does not have to be kept on a line-by-line basis.

3. The permittee shall maintain readily available, annual records on-site which specify the OC emissions from this emissions unit. These records shall be prepared by January 30 of each year and cover the previous calendar year.

4. The permit to install for this emissions unit (P032) 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 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 (lbs/hr): 1.53

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1,167

MAGLC (ug/m3): 10,333

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, 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) is (are) defined as a modification under other provisions of the modification definition, 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 reports which specify the total organic compound emissions from this emissions unit. These reports shall be submitted to the Hamilton County Department of Environmental Services by January 30 of each year and cover the previous calendar year.

2. The permittee shall submit quarterly deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the rolling, 12-month HAPs emissions limitations in term and condition A.2.e. If no deviations occurred during the reporting period, the permittee shall state so in the report.

3. All quarterly deviation reports shall be submitted in accordance with paragraph A.1.c of the General terms and

conditions of this permit.

4. The permittee shall submit deviation (excursion) reports to the Hamilton County Department of Environmental Services which identify all exceedances of the daily polyurethane production limitation in term and condition B.1. The deviation (excursion) report shall be submitted within 45 days after the exceedance occurs.

**E. Testing Requirements**

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

**a. Emission Limitations:**

Organic compound (OC) emissions from the reactor shall not exceed 108 pounds per day and 19.8 tons per year.

**Applicable Compliance Methods:**

The daily OC emission rate is based on the emissions unit's potential to emit (PTE). The PTE for OCs is achieved by manufacturing epoxy. The potential to emit was calculated by the following equation:

$7232 \text{ pounds of solvent employed/day} \times 0.015 \text{ pound of solvent emitted/lbs of solvent employed} = 108.48 \text{ pounds OC/day.}$

$108.48 \text{ pounds of OC/day} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ pounds} = 19.79 \text{ TPY.}$

Compliance with the annual organic compound emission limitation in term and condition A.1 shall be based upon the record keeping requirements as specified in term and condition C.1 and C.3.

**b. Emission Limitations:**

Particulate emissions\* (PE) from the reactor shall not exceed 20.8 pounds per day and 3.8 tons per year.

\* PE = Particulate Matter 10 microns in diameter and less.

**Applicable Compliance Methods:**

The daily and annual PE-PM10 emission rate is based on the emissions unit's PTE. The PTE for PE is achieved by manufacturing epoxy. The potential to emit was calculated by adding fugitive PE to stack PE using the following equations:

$34960 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/pound dry material} \times 0.05 \text{ pound of fugitive PE/pound of PE entrained} = 17.48 \text{ pounds of fugitive PE/day.}$

$34960 \text{ pounds of dry material/day} \times 0.01 \text{ pound of PE entrained/pound of dry material} \times 0.95 \text{ pound of PE captured/pound of PE entrained} \times (1-.99)^* = 3.32 \text{ pounds of stack PE/day.}$

\* control efficiency of fabric filter.

$17.48 \text{ pounds of fugitive PE/day} + 3.32 \text{ pound of stack PE/day} = 20.8 \text{ pounds per day of PE.}$

$20.8 \text{ pounds per day of PE} \times 365 \text{ days/year} \times \text{ton}/2000 \text{ pounds} = 3.79 \text{ TPY.}$

**c. Emission Limitation:**

Visible particulate emissions shall not exceed 10 percent opacity, as a six-minute average.

**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).

**d. Emission Limitation:**

Fugitive visible particulate emissions shall not exceed 20 percent opacity, as a three-minute average, except as provided by the 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)(3).

**e. Emissions Limitations:**

9.9 TPY for any single HAP and 24.9 TPY for combined HAPs.

**Applicable Compliance Method:**

Compliance with the HAP emission limitations in term and condition A.2.e will be determined by the record keeping requirements specified in term and condition C.2.

2. Compliance with the daily polyurethane production limitation in term and condition B.1 shall be determined by the record keeping requirements specified in term and condition C.1.

**F. Miscellaneous Requirements**

1. The following terms and conditions of this permit are federally enforceable: A, B, C.1 - C.3, D, and E.