

Facility ID: 1409030749 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.

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Facility ID: 1409030749 Emissions Unit ID: P004 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>
P004 - Drum filling station with submerged fill - modification	OAC rule 3745-31-05(A)(3) (PTI 14-04945)	Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 7.3 TPY OC.  See section B.1.  The requirements of this rule include compliance with the requirements of OAC rule 3745-31-05(C). See term and condition A.2.b.
	OAC rule 3745-31-05(C) Synthetic minor to avoid title V permitting requirements	

**2. Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations and submerged fill.  
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 P001 (Loading Rack), P002 (Drum Filling Line), P003 (Solvent Blend Tank), P004 (Drum Filling Station with submerged fill), P005 (Blower Fan for cleaning tanker trucks), P006 (1500 gallon Solvent Blend Tank), T001 (Fixed Roof Storage Tank with submerged fill), T002 (Fixed Roof Storage Tank with submerged fill), T003 (Fixed Roof Storage Tank with submerged fill), T004 (Fixed Roof Storage Tank with submerged fill), T005 (Fixed Roof Storage Tank with submerged fill), T006 (Fixed Roof Storage Tank with submerged fill), T007 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T008 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T009 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T010 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T011 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T012 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T013 (6,000 gallon Solvent Storage Tank with submerged fill), any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt emissions units, or future constructed emissions units, 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 permittee shall employ a submerged fill process when operating the drum filling station.

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

1. The permittee shall collect and record the following information for each day for the drum filling operation:
  - a. the company identification for each liquid organic material;
  - b. the number of gallons of throughput for each liquid organic material;
  - c. the molecular weight of each liquid organic material (lbs./lb-mole);
  - d. the vapor pressure (psia) of each liquid organic material;
  - e. the total organic compound emission rate for all liquid organic materials, in pounds per day;

- f. the total number of hours the emissions unit was in operation; and
  - g. the average hourly organic compound emission rate for all organic materials, i.e., (e)/(f), in pounds per hour (average).
2. The permittee shall maintain monthly records of the OC emissions and the material use from the coatings and cleanup materials for this emissions unit. The OC emissions shall be summarized in tons per year at the end of each calendar year.
  3. The permittee shall collect and record the following information each month for the emissions units identified in term and condition A.2.b:
    - a. The name and identification number of each liquid material transferred;
    - b. The individual Hazardous Air Pollutant (HAP)\* content for each HAP of each liquid material in gallon of individual HAP per gallon of material;
    - c. The total combined HAP content of each liquid material in gallon of combined HAPs per gallon of material [sum all the individual HAP contents from (b)];
    - d. The number of gallons transferred of each liquid material;
    - e. The total individual HAP emissions for each HAP from all liquid materials, in pounds or tons per month (b x d x loading loss emission factor from AP-42);
    - f. The total combined HAP emissions from all liquid materials, in pounds or tons per month [sum of all individual HAP emissions in (e)];
    - g. The updated rolling, 12-month summation of individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months; and
    - h. The updated rolling, 12-month summation of total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

\* 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 an individual emissions unit basis.

4. The permit to install for emissions unit P004 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 Allowable Ground-Level Concentration (MAGLC).

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

Pollutant: Ethylene Glycol  
 TLV (ug/m3): 100,000  
 Maximum Hourly Emission Rate (lbs/hr): 8.0  
 Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1800  
 MAGLC (ug/m3): 2381

The above described evaluation determined that the maximum ground level concentration for the new or modified source was less than 80% of the MAGLC. Per ORC 3704.03(F)(4)(d), the owner or operator shall submit an annual report that describes any changes to the emissions unit that affect the air toxic modeling. Changes that can affect the parameters used in applying 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 or chemical with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled, as documented in the most current version of the American Conference of Governmental Industrial Hygienists' (ACGIH's) handbook entitled "TLVs and BEIs" ("Threshold Limit Values for Chemical Substances and Physical Agents, Biological Exposure Indices");
- 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.).

The permittee shall submit annual reports that describe any changes to this emissions unit which affect the air toxic modeling. If no changes were made during the year, then a report shall be submitted stating that no changes were made. This report is due by January 31 of each year and shall cover the previous calendar year.

#### D. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports to the Hamilton County Department of Environmental Services which include the following information:
  - a. An identification of each hour during which the organic compound emissions from the liquid organic materials exceeded 8 pounds per hour, and the actual organic compound emissions for each such hour;
  - b. An identification of each day during which the organic compound emissions from the liquid organic materials exceeded 40 pounds per day, and the actual organic compound emissions for each such day; and

c. Deviation reports shall follow the requirements and reporting schedule in the General Terms and Conditions of this permit to operate.

2. The permittee shall also submit annual reports to the Hamilton County Department of Environmental Services which specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit to the Hamilton County Department of Environmental Services quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations for the emission units identified in term and condition A.2.b. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters (October through December, January through March, April through June and July through September, respectively).

**E. Testing Requirements**

1. Compliance with the emission limitations in section A.1 shall be determined using the following equation from Paint and Ink Manufacturing, Chapter 8 (2000) and AP-42, 5th edition (1995), Chapter 5:

Emission Limitations:

Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 7.3 TPY.

Applicable Compliance Methods:

Mixing losses are the sum of the following equation for each species in the blend:

$$E = [Mx \cdot Kx \cdot A \cdot Px \cdot 3600 \text{ seconds/hour} \cdot H / (R \cdot T)] \cdot B$$

where:

E = emissions of VOC species, in lb/hr;

Mx = molecular weight of VOC species [x], in lb/lbmole;

Kx = gas-phase mass transfer coefficient for VOC species [x], in ft/sec, where Kx can be obtained by the following formula:

$$Kx = 0.00438 \cdot U^{0.78} \cdot [18/Mx]^{1/3} \text{ using } U = \text{wind speed} = 0.1 \text{ mph;}$$

A = surface area of tank (ft.<sup>2</sup>) where A can be obtained by the following formula:

$$A = 28.27 \text{ feet}^2 \text{ for a tank with a diameter of 6 feet;}$$

Px = true vapor pressure of VOC species [x] (if a pure chemical is used) partial pressure of mixture [x] (if a mixture of VOCs is used) at temperature (T) in pounds per square inch at 1 atmosphere (psia), where the partial pressure of mixtures can be obtained by the following formula:

$$Px = mx \cdot VPx$$

where:

mx = liquid mole fraction of VOC species [x] in moles of VOC species [x]/moles of total mixture [x], where mx can be obtained by the following formula:

$$mx = (zx/Mx) / (\sum zx/Mx);$$

zx = liquid mass fraction of VOC species [x] in lb of species [x]/lb of total mixture [x];

VPx = true vapor pressure of VOC species [x] in psia;

R = the universal gas constant at 1 atmosphere of pressure which is 10.73 psia-feet<sup>3</sup>/degree R-lb-mole;

T = temperature of the liquid in degree R, if temperature in degree F, then use the following: degree F + 460;

H = batch time in hours per batch of blend produced; and

B = number of batches of blend produced per hour.

$$E \text{ mix} = E \text{ species } 1 + E \text{ species } 2 + E \text{ species } 3.$$

Loading losses are the sum of the following equation for each species in the blend:

$$\text{Loading losses in lbs/1000 gallons} = 12.46 \text{ SPM/T where}$$

S = saturation factor = 0.5;

P = true vapor pressure of the liquid loaded in psia;

M = molecular weight in lbs/lb-mole; and

T = temperature of bulk liquid loaded in degree R, if temperature in degree F, then use the following: degree F + 460.

$$E \text{ loss} = \text{Loading losses} \cdot \text{gallons/hour} = \text{emissions/hour}$$

$$\text{Loading losses} = E \text{ species } 1 + E \text{ species } 2 + E \text{ species } 3 = \text{lbs of OC/hr for the blend produced.}$$

THE = total hourly emissions = mixing losses (lbs/hr) + loading losses (lbs/hr) = lbs of OC emissions emitted per hour.

Daily emissions = THE in lbs/hr \* hr/batch of blend produced \* batches of blend produced/day = lbs of OC emissions emitted per day.

Annual emissions = THE in lbs/hr \* hr/batch of blend produced \* batches of blend produced per year divided by 2000 lbs = TPY of OC emitted.

2. Compliance with the HAP emissions limitations cited in term and condition A.2.b shall be demonstrated by the record keeping in section C.3.

**F. Miscellaneous Requirements**

1. The following sections 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: 1409030749 Emissions Unit ID: P005 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>
P005 - Blower fan for cleaning tanker trucks - modification	OAC rule 3745-31-05(A)(3) (PTI 14-04945)	Organic compound (OC) emissions shall not exceed 7.3 TPY OC.  See sections B.1 and B.2.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G)(2) and 3745-31-05(C).
	OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8 lbs/hr and 40 lbs/day.
	OAC rule 3745-31-05(C) Synthetic minor to avoid title V permitting requirements	See term and condition A.2.b.

**2. Additional Terms and Conditions**

- (a) Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the emission limitations.  
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 P001 (Loading Rack), P002 (Drum Filling Line), P003 (Solvent Blend Tank), P004 (Drum Filling Station with submerged fill), P005 (Blower Fan for cleaning tanker trucks), P006 (1500 gallon Solvent Blend Tank), T001 (Fixed Roof Storage Tank with submerged fill), T002 (Fixed Roof Storage Tank with submerged fill), T003 (Fixed Roof Storage Tank with submerged fill), T004 (Fixed Roof Storage Tank with submerged fill), T005 (Fixed Roof Storage Tank with submerged fill), T006 (Fixed Roof Storage Tank with submerged fill), T007 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T008 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T009 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T010 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T011 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T012 (10,000 gallon Fixed Roof Storage Tank with submerged fill), T013 (6,000 gallon Solvent Storage Tank with submerged fill), any de minimis emissions units as defined in OAC rule 3745-15-05, any registration status and/or permit exempt emissions units, or future constructed emissions units, 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 permittee shall install, operate and maintain a blower fan rated at 2500 acfm. If a different size fan is installed, the permittee shall notify the Hamilton County Department of Environmental Services - Air Quality Division prior to the change.
2. The permittee shall not operate this emissions unit for more than 4 tanker trucks per day.

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

1. The permittee shall collect and record the following information for each day for the tanker truck drying operation:
  - a. The company identification for each liquid organic material evaporated from each tanker truck.
  - b. The number of minutes to blow dry each tanker truck.
  - c. The number of tanker trucks blown dry per day.
  - d. The organic compound content of each material blown dry in each tanker truck, in pounds OC per gallon.
  - e. The total organic compound emission rate for all liquid organic materials evaporated from the tanker trucks, in pounds per day. This is the sum of [1.095 gallons/truck \* (d)] for each truck processed during the day.
  - f. The total number of hours the emissions unit was in operation, in hours per day.
  - g. The average hourly organic compound emission rate for all materials, i.e., (e)/(f), in pounds per hour (average).

Note: See equations in the testing section, Section E.1. Test results indicate 1.095 gallons of residual material

per truck.

2. The permittee shall collect and record the total annual organic compound emission rate for all liquid materials evaporated from the tanker trucks, in pounds or tons per year (annual sum of data from term and condition C.1.e).
3. The permittee shall collect and record the following information each month for the emissions units identified in term and condition A.2.b:
  - a. The name and identification number of each liquid material evaporated.
  - b. The total individual HAP emissions for each HAP from all liquid materials evaporated, in pounds or tons per month (see section E.1).
  - c. The total combined HAP emissions from all liquid materials evaporated, in pounds or tons per month (see section E.1).
  - d. The updated rolling, 12-month summation of individual HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.
  - e. The updated rolling, 12-month summation of total combined HAP emissions, in pounds or tons. This shall include the information for the current month and the preceding eleven calendar months.

\* 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 individual emissions unit basis.

**D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports to the Hamilton County Department of Environmental Services which include the following information:
  - a. An identification of each hour during which the organic compound emissions from the evaporated liquid organic materials exceeded 8 pounds per hour, and the actual organic compound emissions for each such hour.
  - b. An identification of each day during which the organic compound emissions from the evaporated liquid organic materials exceeded 40 pounds per day, and the actual organic compound emissions for each such day.
  - c. Deviation reports shall follow the requirements and reporting schedule in the General Terms and Conditions of this permit to operate.
2. The permittee shall also submit annual reports to the Hamilton County Department of Environmental Services which specify the total organic compound emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit to the Hamilton County Department of Environmental Services quarterly deviation (excursion) reports which identify all exceedances of the rolling, 12-month HAP emission limitations for the emission units identified in term and condition A.2.b. If no exceedances occurred, the permittee shall state so in the report. The reports shall be submitted 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).

**E. Testing Requirements**

1. Compliance with the emission limitations in Sections A.1 and A.2 shall be determined using the following equations:
 

Emission Limitations:  
Organic compound (OC) emissions shall not exceed 8 lbs/hr, 40 lbs/day and 7.3 TPY.

Applicable Compliance Method:  
Emissions OC (lbs/hr) = Lbs of OC emitted/day divided by the hours of operation of emissions unit P005/day.

Emissions of OC in lbs/day  
= sum of lbs of OC emitted from each liquid organic material evaporated during the day.  
= sum of [1.095 residual gallons/truck x organic compound content of the liquid organic material in the truck (lbs/gallon) x number of trucks blown dry per day].

Emissions OC in tons per year = the sum of the daily emissions rates for each day of operation in the calendar year.
2. Compliance with the HAP emission limitations in term and condition A.2.b shall be demonstrated by the record keeping in Section C.3.

**F. Miscellaneous Requirements**

1. The following sections of this permit are federally enforceable: A, B, C, D and E.