

**AIR EMISSION SUMMARY**

**The air contaminant sources listed below comprise the Permit to Install for TRINITY INDUSTRIES, INC. (PLANT NO. 374) located in Hancock County. The sources listed below shall not exceed the emission limits/control requirements contained in the following table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.**

<u>Ohio EPA Source</u>	<u>Source Identification</u>	<u>BAT Determination</u>	<u>Federal &amp; OAC Rules</u>	<u>Control/Usage Requirements</u>	<u>Permit Allowable Mass Emissions and/or</u>
<b>P001</b>	<b>Automated Small Parts Blast Unit with Baghouse</b>	<b>Compliance with Permit Allowable Emission Rate</b>	<b>3745-31-05</b>	<b>0.43 lbs PE/hr;</b>	<b>1.88 tons PE/yr</b>
				<b>3745-17-07 20% opacity as a six-minute average</b>	
				<b>3745-17-11*</b>	
<b>P002</b>	<b>Manual Blast Booth with Baghouse</b>	<b>Compliance with Permit Allowable Emission Rate</b>	<b>3745-31-05</b>	<b>0.82 lbs PE/hr;</b>	<b>3.60 tons PE/yr</b>
				<b>3745-17-07 20% opacity as a six-minute average</b>	
				<b>3745-17-11*</b>	
<b>K001</b>	<b>Railcar Coating Line with two 1.75 mmBTU Natural Gas-Fired Ovens (for cold weather operation)</b>	<b>Compliance with Permit Allowable Emission Rate &amp; Daily Volume Weighted Average</b>	<b>3745-31-05</b>	<b>Coating Emissions</b>	<b>630.00 lbs OC/day; 81.90 tons OC/yr 6.30 lbs PE/day; 0.82 tons PE/yr</b>
					<b>Cleanup Emissions</b>
					<b>683.33 lbs OC/mth; 4.10 tons OC/yr</b>
					<b>Not to exceed 10 tons per year of any individual Hazardous Air</b>

Pollutant (HAP)

Not to exceed 25  
tons per year for  
any combination of  
Hazardous Air  
Pollutants

3745-21-09 Not to exceed 3.5  
(U)(1) lbs VOC per gallon  
coating.

3745-17-07 0% opacity as a \_\_\_\_\_ six-  
minute average

3745-17-11\*

\* The limits established in accordance with OAC 3745-31-05 are more stringent than those established by 3745-17-07 and 3745-17-11.

SUMMARY

TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons/Year</u>
<u>PE</u>	<u>5.48</u>
<u>OC</u>	<u>86.00</u>
<u>HAP</u>	<u>9.9</u>
<u>HAPs</u>	<u>24.9</u>

## INTRODUCTION

PTI #03-11053 serves to permit three existing emissions units at Trinity Industries, Inc. in Findlay, Ohio: an automated small parts blast unit (emissions unit P001), a manual railcar blast booth (emissions unit P002), and a railcar paint line (emissions unit K001). The paint line consists of two coating scenarios during which each railcar will undergo either a single-coat system or a two-coat system. To avoid Title V permitting requirements, Trinity Industries, Inc. has requested federally enforceable permit conditions to restrict the potential to emit OC from emissions unit K001 to less than 100 tons per year. Trinity Industries has also requested a permit condition limiting the emissions of any individual HAP to less than 10 tons per year and any combination of HAPs to less than 25 tons per year.

A BAT study was conducted to determine the cost effectiveness of installing control equipment to further reduce OC emissions from the coating line. The study focused on three types of incineration and the results of the analysis proved that add-on controls were not economically feasible.

### A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. The volatile organic compound (VOC) content of the coatings employed shall not exceed 3.5 pounds of VOC per gallon of coating, based on a daily, volume-weighted average.
2. Emissions shall not exceed 10 tons per year for each individual HAP (Hazardous Air Pollutant) and 25 tons per year for any combination of HAPs.
3. Emissions from cleanup materials shall be limited to 683.30 pounds of OC per month and 4.10 tons of OC per year.
4. The maximum annual coating usage for this emissions unit shall not exceed 46,800 gallons, based upon a rolling, 12-month summation of the coating usage figures.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the coating usage levels specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Cumulative Coating Usage</u>
1	9,360 gallons
1-2	12,763 gallons
1-3	16,166 gallons
1-4	19,569 gallons

1-5	22,972 gallons
1-6	26,375 gallons
1-7	29,778 gallons
1-8	33,181 gallons
1-9	36,584 gallons
1-10	39,987 gallons
1-11	43,390 gallons
1-12	46,800 gallons

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual coating usage limitation shall be based upon a rolling, 12-month summation of the coating usage figures.

**B. OPERATIONAL RESTRICTIONS**

1. This permit allows for the use of the coating specified by the permittee in the application for PTI number 03-11053. In conjunction with BAT requirements of OAC 3745-31-05, the xylene emission limitations specified in this permit were established in accordance with Ohio EPA's "Air Toxics Policy" and are based on both the coating formulation data and the design parameters of the emissions unit's exhaust systems, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for the pollutant based on the Screen3 model and a comparison of the predicted 1-hour maximum ground-level concentration to the maximum allowable ground-level concentration ("MAGLC"). The following summarizes the results of the modeling for this pollutant:

Emissions Unit: K001  
Pollutant: Xylene  
TLV (microgram/m<sup>3</sup>): 434  
Max. Hourly Emission Rate (lbs/hr): 212.40  
Predicted 1-Hour Max. Ground-Level Concentration at Fenceline (ug/m<sup>3</sup>): 6,279  
MAGLC (ug/m<sup>3</sup>): 10,333

Any of the following changes may be deemed a "modification" to an emissions unit and, as such, prior notification to and approval from the Ohio EPA, Northwest District Office, Division of Air Pollution Control, are required:

- a. Any change in the composition of the coatings or use of new coatings that would result in the emissions of a more toxic compound than was previously emitted.
- b. Any change in the composition of the coatings or use of new coatings that would result in the emissions of any organic compound excluded from the definition of "VOC" in OAC 3745-21-01 (B)(6).
- c. Any change to the emissions unit or its exhaust characteristics that would result in an exceedances of the Maximum Acceptable Ground-Level Concentration (MAGLC) of air toxics beyond plant property lines.

- d. Any change in the composition of the coatings/cleanup materials or use of new coatings/cleanup materials that would result in an increase in emissions of any "Hazardous Air Pollutants" (HAPs) as defined in OAC 3745-77-01 (V).
  - e. Any change in an emissions unit or its method of operation that would either require an increase in the emission limitations established by this permit or would otherwise be considered a "modification" as defined in OAC 3745-31-01 (J).
2. The pressure drop across each baghouse shall be maintained within the range of 1 - 6 inches of water while emissions units P001 and P002 are in operation.

**C. MONITORING AND RECORD KEEPING REQUIREMENTS**

1. The permittee shall collect and record the following information each day for emissions unit K001:
  - a. The name and identification number of each coating, as applied.
  - b. The VOC content (excluding water and exempt solvents) and the number of gallons (excluding water and exempt solvents) of each coating, as applied.
  - c. The daily volume-weighted average VOC content of all coatings, as applied, calculated in accordance with the equation specified in paragraph (B)(9) of OAC rule 3745-21-10 for  $C_{VOC,2}$ .
2. The permittee shall collect and record the following information on a monthly basis for the purpose of determining annual OC emissions:
  - a. The name and identification of each cleanup material employed.
  - b. The number of gallons of each cleanup material employed.
  - c. The VOC content of each cleanup material, in pounds per gallon.
  - d. The total OC emissions from all coatings and cleanup materials, in pounds or tons.
3. The permittee shall also maintain monthly records summarizing the total gallons of cleanup solvent sent off-site for disposal or reclamation.
4. The permittee shall collect and record the following information on a monthly basis for the purpose of determining annual HAP emissions:
  - a. The name and identification of each coating material, as applied.

- b. The HAP content (volume percent multiplied by the HAP density) of each HAP in each coating material (pounds/gallon), as applied.
- c. The volume (gallons) of each coating employed.
- d. The emissions of each individual HAP from all coating materials employed [the sum of (b) x (c) for each HAP in each coating].
- e. The name and identification of each cleanup material, as applied.
- f. The HAP content (volume percent multiplied by the HAP density) of each HAP in each cleanup material (pounds/gallon), as applied.
- g. The volume (gallons) of each cleanup material employed.
- h. The emissions of each individual HAP from all cleanup materials employed [the sum of (f) x (g) for each HAP in each cleanup material].
- i. The total emissions of each individual HAP from all coating and cleanup materials combined [the sum of (d) and (h) for each individual HAP].
- j. The total emissions of all HAPs combined from all coating and cleanup materials employed [the sum of each individual HAP's total emissions from (i)].

In addition, the permittee shall calculate the rolling 12-month summation of emission rates of each individual HAP and the rolling 12-month total summation of emission rates of all HAPs combined. As specified in (A) (2) and (A) (3) above, the emissions of individual HAPs from operations at this facility shall be less than 10 tons per year and the emissions of all HAPs combined from operations at this facility shall be less than 25 tons per year.

A listing of the Hazardous Air Pollutants (HAPs) can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Ohio EPA, Division of Air Pollution Control, Northwest District Office. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

5. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the baghouse on weekly basis.

6. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

**D. REPORTING REQUIREMENTS**

1. The permittee shall notify the Ohio EPA Northwest District Office in writing of any daily record showing that the daily volume-weighted average VOC content exceeds the applicable limitation. The notification shall include a copy of such record and shall be sent to the Ohio EPA Northwest District Office within 45 days after the exceedance occurs.
2. The permittee shall submit quarterly written reports summarizing the following:
  - a. any deviations (excursions) from emission limitations and operational restrictions that have been detected by testing, monitoring, and record keeping requirements specified in this permit;
  - b. all periods of time during which the pressure drop across the baghouse(s) did not comply with the allowable range specified in B.2;
  - c. the probable cause of such deviations; and
  - d. any corrective actions or preventive measures that have been or will be taken.

If no deviations occurred during the calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

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 (these quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06). All reports shall be submitted to the Northwest District Office.

3. The permittee shall also submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

**E. TESTING REQUIREMENTS**

1. Compliance Methods Requirements: Compliance with the emission

limitations shall be determined in accordance with the following method(s) :

- a. Emission Limitation: - coating - 3.5 pounds of VOC per gallon, minus water and exempt solvents

Applicable Compliance Method: OAC rule 3745-21-10 (B). USEPA Methods 24 and 24A shall be used to determine the VOC contents for (a) coatings and (b) flexographic and rotogravure printing inks and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

- b. Emission Limitation: - coating - 630.0 pounds of OC per day

Applicable Compliance Method: This daily limit represents the units "maximum capacity" i.e., its potential to emit based on the maximum hourly coating application rate. Although this permit does not require periodic record keeping to verify compliance with this limit, the permittee shall maintain adequate records in the facility's files to verify that the emissions unit's maximum capacity has not been increased.

- c. Emission Limitation: - coating - 81.90 tons of OC per year

Applicable Compliance Method: Compliance shall be based upon the record keeping specified in section C.2 of the terms and conditions of this permit.

- d. Emission Limitation: - cleanup - 683.33 pounds of OC per month

Applicable Compliance Method: This monthly limit represents the units "maximum capacity" i.e., its potential to emit based on the maximum hourly coating application rate. Although this permit does not require periodic record keeping to verify compliance with this limit, the permittee shall maintain adequate records in the facility's files to verify that the emissions unit's maximum capacity has not been increased.

- e. Emission Limitation: - cleanup - 4.10 tons of OC per year

Applicable Compliance Method: Compliance shall be based upon the record keeping specified in section C.2 of the terms and conditions of this permit.

- f. Emission Limitation: - not to exceed 10 tons of each individual HAP and 25 tons per year for any combination of HAPs

Applicable Compliance Method: Compliance shall be based upon the record keeping specified in section C.4 of the terms and conditions of this permit.

- g. Emission Limitation: - coating - 6.30 pounds of PE per day

Applicable Compliance Method: Compliance with the PE emissions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03 (B)(10). In the absence of Ohio EPA requiring such testing, the permittee may calculate actual PE emission rates for the unit utilizing the following equation for each coating employed:

$$E = A \times (1 - TE) \times (1 - CE)$$

where

E = actual particulate emission rate (pounds per day)

A = coating solids usage rate [gallons coating employed (gal/day) x coating density x wt. % solids]

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids employed.

CE = control efficiency of the control equipment (filters)

- h. Emission Limitation: - coating - 0.82 tons of PE per year

Applicable Compliance Method: Compliance with the PE emissions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03 (B)(10). In the absence of Ohio EPA requiring such testing, the permittee may calculate actual PE emission rates for the unit utilizing the following equation for each coating employed:

$$E = A \times (1 - TE) \times (1 - CE)$$

where

E = actual particulate emission rate (tons per year)

A = (Coating solids usage rate) = Gallons coating employed (gal/yr) x coating density x wt. % solids

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids employed.

CE = control efficiency of the control equipment (filters)

- i. Emission Limitation: - emissions unit P001 - 0.43 pounds of PE per hour and 1.88 tons of PE per year

Applicable Compliance Method: Compliance with the PE emission rate shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03 (B)(10). In the absence of Ohio EPA requiring such testing, the permittee may calculate actual PE emission rates for the unit utilizing the following equation: inlet grain loading rate (gr/scfm) x control efficiency x volume flow rate (ACFM).

- j. Emission Limitation: - emissions unit P002 - 0.82 pounds of PE per hour and 3.60 tons of PE per year

Applicable Compliance Method: Compliance with the PE emissions shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03 (B)(10). In the absence of Ohio EPA requiring such testing, the permittee may calculate actual PE emission rates for the unit utilizing the following equation: inlet grain loading rate (gr/scfm) x control efficiency x volume flow rate (ACFM).

**F. MISCELLANEOUS REQUIREMENTS**

None