

**A. INTRODUCTION**

Permit to Install (PTI #03-13009) serves to modify one existing adhesive spray booth (emissions units R003) and allows for the installation of a new adhesive spray booth (emissions unit R004) at Findlay Division - Plant One. Currently, emissions units R003 is permitted under PTI #03-8785. However, a permit modification has been requested by the company to increase the OC emission limits.

A BAT study was conducted to determine the cost effectiveness of installing control equipment to minimize the release of organic solvent vapors resulting from the application of solvent-based adhesives during the production of automotive door panel inserts. The results of the study determined that the installation of control equipment, specifically a thermal oxidizer, was not economically feasible.

**B. OPERATIONAL RESTRICTIONS**

1. The visible emissions (VE's) from emissions units R003 and R004 shall not exceed 0% opacity, as a six-minute average.
2. Emissions units R003 and R004 shall employ only adhesive coatings which are nonphotochemically reactive materials, as defined by OAC Rule 3745-21-01 (C)(5). This determination shall be based on the actual formulation of the adhesives and cleanup materials after any final in-plant reducing or thinning and prior to application of the product.
3. The organic compounds (OC) content of each adhesive employed in emissions unit R003 shall not exceed 5.85 pounds of OC per gallon. The OC content of each adhesive employed in emissions unit R004 shall not exceed 5.05 pounds of OC per gallon.
4. This permit allows for the use of the adhesive specified by the permittee in the application for PTI number 03-13009. In conjunction with BAT requirements of OAC 3745-31-05, the hexane and acetone emission limitations specified in this permit were established in accordance with Ohio EPA's "Air Toxics Policy" and are based on both the adhesive 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: R003	Emissions Unit: R004
Pollutant: Acetone	Pollutant: Hexane
TLV (mg/m <sup>3</sup> ): 1780	TLV (mg/m <sup>3</sup> ): 176
Max. Hourly Emission Rate (lbs/hr): 21.95	Max. Hourly Emission Rate (lbs/hr): 1.89
Predicted 1-Hour Max. Ground-Level Concentration at Fenceline (ug/m <sup>3</sup> ): 10,500	Predicted 1-Hour Max. Ground-Level Concentration at Fenceline (ug/m <sup>3</sup> ): 375.1
MAGLC (ug/m <sup>3</sup> ): 42,381	MAGLC (ug/m <sup>3</sup> ): 4,190

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 adhesives or use of new adhesives that would result in the emissions of a more toxic compound that was previously emitted.
- b. Any change in the composition of the adhesives or use of new adhesives 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 exceedance 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).

**C. MONITORING/RECORD KEEPING REQUIREMENTS**

1. The permittee shall maintain daily records that list the following information for emissions units R003 and R004:
  - a. The company identification of each adhesive employed.
  - b. An indication of whether or not each adhesive is a photochemically reactive material.
2. The permittee shall collect and record the following information (for emissions units R003 and R004) on a monthly basis for the purpose of determining annual OC emissions:
  - a. The company identification of each cleanup material employed.
  - b. The number of gallons of each cleanup material employed.
  - c. The OC content of each cleanup material, in pounds per gallon.
  - d. The total OC emissions from all coating and cleanup materials, in pounds or tons.
3. All records shall be retained in the permittee's files for a period of five years and shall be made available to the Northwest District Office, Division of Air Pollution Control, for review during normal business hours.

**D. REPORTING REQUIREMENTS**

1. The permittee shall submit quarterly written reports summarizing the following:
  - a. any deviations from emission limitations and operational restrictions that have been detected by testing, monitoring, and record keeping requirements specified in this permit;
  - b. the probable cause of such deviations; and
  - c. 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.

2. The permittee shall submit annual reports which summarize the total amount of OC emissions, in tons per year. These reports shall be submitted by January 31 of each year and shall cover the previous calendar year.

**E. TESTING REQUIREMENTS**

1. Compliance with the organic compound and particulate matter emission limitations outlined in Sections B.1, C.1, and the Air Emissions Summary of this permit shall be determined in accordance with the following method(s):

- a. Emission Limitation - adhesive - for emissions unit R003 - 351.12 lbs OC/day; for emissions unit R004 - 30.24 lbs OC/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.

- b. Emission Limitation - adhesive - for emissions unit R003 - 64.10 tons OC/yr; for emissions unit R004 - 5.52 tons OC/yr.

Applicable Compliance Method - The record keeping requirements in section C.2 shall be used to demonstrate compliance with the emission limitation.

- c. Emission Limitation - cleanup - for emissions unit R003 - 65.80 lbs OC/month and 0.40 tons OC/year;

for emissions unit R004 - 64.40 lbs OC/month and 0.39 tons per year.

Applicable Compliance Method - The record keeping requirements in section C.2 shall be used to demonstrate compliance with the emissions limitation.

- d. Emission Limitation - adhesive - for emissions unit R003 - 3.36 lbs PE/day and 0.61 tons PE/year; for emissions unit R004 - 0.48 lbs PE/day and 0.09 tons PE/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 (pounds per day or pounds per year)

A = coating solids usage rate [gallons coating employed (gal/day or gal/year) 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)

- e. Emission Limitation - 0% opacity as a six-minute average

Applicable Compliance Method - OAC rule 3745-17-03(B)(1)

**F. MISCELLANEOUS REQUIREMENTS**

None

