Facility ID: 0855100531 Issuance type: Final State Permit To Operate

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part II" and before "A. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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

Facility ID: 0855100531 Emissions Unit ID: P001 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P001-Expandable Polystyrene (EPS) pre-expander 350 lbs/hr (EX 1000)	OAC rule 3745-31-05(A)(3) PTI 08-04703	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 5.25 lbs/hr.
	OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The total allowable OC (pentane) emissions rate from emission units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 shall not exceed 74.9 tons/yr, based upon a rolling, 12-month summation combined.

2. **Additional Terms and Conditions**

   (a) The hourly emission limitation was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.
   The maximum pentane content of the EPS beads, incoming from the bead supplier shall not exceed 6 percent by weight.

B. **Operational Restrictions**

1. The maximum annual EPS resin usage rate for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 shall not exceed 2,500,000 tons per year, based upon a rolling, 12-month summation of the monthly EPS resin usage rate.

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

1. The permittee shall maintain monthly records of the chemical analyses of the EPS resin provided by the supplier for each lot, shipment or box of EPS resin delivered to the facility. The analysis shall include the percent (%) by weight pentane in the EPS resins.

2. The permittee shall collect and record the following information each month for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined:

   a. The EPS resin usage rate, in pounds, for each month.

   b. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the EPS resin usage rate in pounds.

   c. The actual total OC (pentane) emissions in tons for each month, which shall be determine as follows:

      [pentane loss from each emissions unit (lb pentane/lb EPS resins) x the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month) = tons OC (pentane)/month.

      d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.

3. The permit to install for this emissions unit P001 was evaluated based on the sum of the emissions from all stacks, and the design parameters of the emissions units' 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 Acceptable

Ground-Level Concentration (MAGLC). The following summarized the results of the modeling for the "worst-case" pollutant(s).

Pollutant: Pentane

TLV(mg/m3): 1770.55

Maximum Hourly Emission Rate (lbs/hr): 45.17

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 232.2

MAGLC(ug/m3): 42,156

4. Physical changes to or changes in the method of operation of the emissions unit after its installation could affect the parameters used to determine whether or not the "Air Toxic 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 applying the "Air Toxic Policy" include the following:

   a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of the 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.

5. The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still 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. where 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 that specify the total actual annual OC (pentane) emissions from this emissions unit for the previous calendar year. These reports shall be submitted by April 15 of each year. This reporting requirement may be satisfied by including and identifying the specific emission data from this emissions unit in the annual Fee Emission Report.

2. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month OC emissions (pentane) exceeded the 74.9 tons per year rolling 12-month emission limitation, and the actual rolling, 12 month OC emissions for each such month.

3. The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the pentane content of the EPS resin exceeded 6%, and the actual pentane content of the EPS resins for each such month.

4. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month limitation and for the first 12 calendar months of operation following the issuance of this permit, all exceedances of the maximum allowable cumulative EPS resin usage levels in Section B.1.

5. These quarterly deviation reports (excursion) shall be submitted to the Ohio EPA District Office or local air agency by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviation occurred during a calendar quarter, the permittee shall submit a report which states that no deviation occurred during the calendar quarter.

E. **Testing Requirements**

1. Compliance with the specified emission limitations in Section A.1. of this permit shall be demonstrated in accordance with the following methods:
   Emission limitation:
   The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 5.25 lbs/hr.

   Applicable Compliance Method:
   The emission limitation is based upon the unit's potential to emit, which was determined by multiplying the maximum hourly process rate (350 lbs EPS resin/hr) times the pentane emission factor (0.015 lb pentane emissions/lb EPS), as certified by the manufacturer (HIRSCH Maschinenbau 9/13/2005).
   Emission limitation:
   The total allowable OC emissions (pentane) rate from emission units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 shall not exceed 74.9 tons/yr, based upon a rolling, 12-

month summation of the monthly OC emissions from the processing of EPS resin.

Applicable Compliance Method:
Compliance with the annual OC emission (pentane) limitation shall be based on the record keeping requirements specified in section C.2.

F. **Miscellaneous Requirements**

1. The following terms and conditions are federally enforceable: A, B, C.1, C.2, D and E.