

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install **08-04731**

A. Source Description

Polysource Inc., an EPS expansion and molding facility, is located in Miami County. Polysource Inc. is proposing, the installation of fourteen (14) new emission units and wants to limit the Organic Compound (OC). Therefore, through the limitation on the OC emissions from the processing of EPS resins, they will be a synthetic minor facility and avoid Title V permitting and major non-attainment NSR.

B. Facility Emissions and Attainment Status

Polysource Inc. is currently classified as a minor stationary source pursuant to Title V operating permit requirements for OC. Miami County is currently designated as basic non-attainment for ozone.

C. Source Emissions

Potential emissions of OC from this facility, without any federally enforceable restrictions is 335.85 tons per year. Limiting the annual OC emissions from the processing of EPS resins will limit the OC emissions to 74.9 tons per rolling, 12-month summation. Therefore the allowable emissions of OC from this facility is 79.0 tons per year [synthetic minor limit of 74.9 tons OC/yr (P001-P014) + 4.1 tons/yr (6 de minimis sources)].

D. Conclusion

Polysource Inc. will become a synthetic minor facility by limiting the annual OC emissions from the processing of EPS resins effectively restricting the facility potential to emit (PTE) for OC to below Title V operating permit threshold levels and major non-attainment NSR. Monthly monitoring, record keeping and calculations, along with quarterly deviation reports from the emission units, will be required to monitor compliance. Therefore, through federally enforceable terms and conditions and record keeping requirements, Polysource Inc. will not trigger the Title V permitting requirements.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL
MIAMI COUNTY**

CERTIFIED MAIL

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov.
Center

Application No: 08-04731

Fac ID: 0855100531

DATE: 12/15/2005

Polysource, Inc.
Robert Brinkman
P.O. Box 916 555 E. Statler Rd. (non deliverable)
Piqua, OH 453569227

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$2800** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

RAPCA

Miami Valley Reg Planning Commission

IN

MIAMI COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL 08-04731 FOR AN AIR CONTAMINANT SOURCE FOR
Polysource, Inc.

On 12/15/2005 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Polysource, Inc.**, located at **555 E Statler Rd, Piqua**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 08-04731:

New pre expander.

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

John Paul, Regional Air Pollution Control Agency, 117 South Main Street, Dayton, OH 45422-1280
[(937)225-4435]



**Permit To Install
Terms and Conditions**

**Issue Date: To be entered upon final issuance
Effective Date: To be entered upon final issuance**

DRAFT PERMIT TO INSTALL 08-04731

Application Number: 08-04731
Facility ID: 0855100531
Permit Fee: **To be entered upon final issuance**
Name of Facility: Polysource, Inc.
Person to Contact: Robert Brinkman
Address: P.O. Box 916 555 E. Statler Rd. (non deliverable)
Piqua, OH 453569227

Location of proposed air contaminant source(s) [emissions unit(s)]:
**555 E Statler Rd
Piqua, Ohio**

Description of proposed emissions unit(s):
New pre expander.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Polysource, Inc.

Facility ID: 0855100531

PTI Application: 08-04731

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., 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.)

3. Records Retention Requirements

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 this permit. Such records may be maintained in computerized form.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections,

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conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

6. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

7. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

9. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental

Polysource, Inc.

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Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

10. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available

Polysource, Inc.

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Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only) TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

<u>Pollutant</u>	<u>Tons Per Year</u>
organic compound	74.9

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(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 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>
P001-Expandable Polystyrene (EPS) pre-expander 350 lbs/hr (EX 1000)	OAC rule 3745-31-05(A)(3)	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

- 2.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.
- 2.b 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,

Emissions Unit ID: **P001**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

**Polys
PTI A**Emissions Unit ID: **P001****Issued: To be entered upon final issuance**

- 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

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.

Polysource, Inc.**PTI Application: 08-04724****Issue:****Facility ID: 0855100531****Emissions Unit ID: P001**

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.

4. 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.

Polys**PTI A**Emissions Unit ID: **P001****Issued: To be entered upon final issuance****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:
 - a. 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).
 - b. 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.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
 - b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
 - c. The emission testing shall be conducted using industry acceptable test methods.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

Polys**PTI A**Emissions Unit ID: **P001****Issued: To be entered upon final issuance**

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P002**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P002-Expandable Polystyrene (EPS) pre-expander EX 2000	OAC rule 3745-31-05(A)(3)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 10.5 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

- 2.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.
- 2.b 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,

Polysource, Inc.
 PTI Application: 08-04724
 Issue:

Facility ID: 0855100531

Emissions Unit ID: P002

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

**Polys
PTI A**Emissions Unit ID: **P002****Issued: To be entered upon final issuance**

- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month}.$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P002 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

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.

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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.

4. 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.

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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:

- a. Emission limitation:

The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 10.5 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 (700 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.

- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.

- c. The emission testing shall be conducted using industry acceptable test methods.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA district Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

Polys**PTI A**Emissions Unit ID: **P003****Issued: To be entered upon final issuance****PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(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 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>
P003-Expandable Polystyrene (EPS) molding machine (HS1300)	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b 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,

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Emissions Unit ID: 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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

**Polys
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- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month}.$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P003, 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

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.

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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.

4. 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.

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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:

- a. Emission limitation:

The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.

- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.

- c. The emission testing shall be conducted using industry acceptable test methods.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P004**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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-Expandable Polystyrene (EPS) molding machine (HS1300)	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b The maximum pentane content of the EPS beads, incoming from the bead supplier shall not exceed 6 percent by weight.

B. Operational Restrictions

**Polys
PTI A**Emissions Unit ID: **P004****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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Emissions Unit ID: P004

- 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 P004 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

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

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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.

4. 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.

Polys**PTI A****Issued: To be entered upon final issuance**Emissions Unit ID: **P004****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:

- a. Emission limitation:

The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.

- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.

- c. The emission testing shall be conducted using industry acceptable test methods.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P005**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b 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,

**Polys
PTI A**Emissions Unit ID: **P005****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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:
- $$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}]$$
- d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P005 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

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.

Issued: To be entered upon final issuance

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.

4. 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.

Polys**PTI A****Issued: To be entered upon final issuance**Emissions Unit ID: **P005****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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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PTI A**

Emissions Unit ID: **P005**

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- The specific operations(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 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>
P006-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 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

- The maximum annual EPS resin usage rate for emissions units P001, P002, P003,

**Polys
PTI A**Emissions Unit ID: **P006****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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 P006 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

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.

Issued: To be entered upon final issuance

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.

4. 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.

Polys**PTI A****Issued: To be entered upon final issuance**Emissions Unit ID: **P006****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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

Issued: To be entered upon final issuance

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P007-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b 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,

**Polys
PTI A**Emissions Unit ID: **P007****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

**Polys
PTI A**Emissions Unit ID: **P007****Issued: To be entered upon final issuance**

- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P007 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

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.

Emissions Unit ID: P007

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.

4. 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.

Polys**PTI A**Emissions Unit ID: **P007****Issued: To be entered upon final issuance****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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

Issued: To be entered upon final issuance

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(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 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>
P008-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b 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,

**Polys
PTI A**Emissions Unit ID: **P008****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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PTI A**Emissions Unit ID: **P008****Issued: To be entered upon final issuance**

- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P008, 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

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.

Polysource, Inc.**PTI Application: 08-04724****Issue:****Facility ID: 0855100531****Emissions Unit ID: P008**

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.

4. 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.

Polys**PTI A**Emissions Unit ID: **P008****Issued: To be entered upon final issuance****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:
 - a. Emission limitation:
The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).
 - b. 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.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
 - b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
 - c. The emission testing shall be conducted using industry acceptable test methods.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

Polys**PTI A**Emissions Unit ID: **P008****Issued: To be entered upon final issuance**

- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P009**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P009-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/hr. 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

- 2.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.
- 2.b 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,

Polysource, Inc.**PTI Application: 08-04724****Issue****Facility ID: 0855100531****Emissions Unit ID: P009**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

**Polys
PTI A**Emissions Unit ID: **P009****Issued: To be entered upon final issuance**

- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month}.$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P009 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

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.

Polysource, Inc.**PTI Application: 08-04724****Issue:****Facility ID: 0855100531****Emissions Unit ID: P009**

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.

4. 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.

Polys**PTI A**Emissions Unit ID: **P009****Issued: To be entered upon final issuance****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:
 - a. Emission limitation:
The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).
 - b. 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.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
 - b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
 - c. The emission testing shall be conducted using industry acceptable test methods.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P010**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P010-Expandable Polystyrene (EPS) molding machine HS1300	OAC rule 3745-31-05(A)(3)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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

- 2.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.
- 2.b 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,

Polysource, Inc.**PTI Application: 08-04724****Issue****Facility ID: 0855100531****Emissions Unit ID: P010**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P010 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

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.

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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.

4. 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.

Polys**PTI A****Issued: To be entered upon final issuance**Emissions Unit ID: **P010****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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 0.65 lb/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 (43.2 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P011**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P011-Expandable Polystyrene (EPS) molding machine HS1500	OAC rule 3745-31-05(A)(3)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 1.62 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

- 2.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.
- 2.b 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,

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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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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:

$$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}$$
 - d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P011 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

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.

Issued: To be entered upon final issuance

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.

4. 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.

Polys**PTI A****Issued: To be entered upon final issuance**Emissions Unit ID: **P011****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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 1.62 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 (108 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

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PTI A**

Emissions Unit ID: **P012**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P012-Expandable Polystyrene (EPS) molding machine HS1500	OAC rule 3745-31-05(A)(3) OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)	The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 1.62 lbs/hr. 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

- 2.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.
- 2.b 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,

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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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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 P012 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

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.

Issued: To be entered upon final issuance

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.

4. 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.

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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:

- a. The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 1.62 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 (108 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).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
- c. The emission testing shall be conducted using industry acceptable test methods.
- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

**Polys
PTI A**

Emissions Unit ID: **P013**

Issued: To be entered upon final issuance

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P013 - Warehouse	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)</p>	<p>The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 31.5 lbs/hr.</p> <p>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.</p>

2. Additional Terms and Conditions

- 2.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.
- 2.b 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,

**Polys
PTI A**Emissions Unit ID: **P013****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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 P013 was evaluated based on the actual materials employed, 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): 31.5

Predicted 1-Hour Maximum Ground-Level
Concentration (ug/m3): 107.9

MAGLC(ug/m3): 42,156

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.

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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.

4. 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:

- a. Emission limitation:

The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 31.5 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 (1050 lbs EPS resin/hr) times the pentane emission factor (0.03 lb pentane emissions/lb EPS), as certified by the manufacturer (HIRSCH Maschinenbau 9/13/2005).

- b. 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.

2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.

- b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.

- c. The emission testing shall be conducted using industry acceptable test methods.

- d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(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 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>
P014 - Aging bags	<p>OAC rule 3745-31-05(A)(3)</p> <p>OAC rule 3745-31-05(C) (Synthetic minor to avoid Title V and major non-attainment NSR)</p>	<p>The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 21.0 lbs/hr.</p> <p>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.</p>

2. Additional Terms and Conditions

- 2.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.
- 2.b The maximum pentane content of the EPS beads, incoming from the bead supplier shall not exceed 6 percent by weight.

B. Operational Restrictions

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PTI A**Emissions Unit ID: **P014****Issued: To be entered upon final issuance**

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.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the EPS resin usage levels specified in the following table for emissions units P001, P002, P003, P004, P005, P006, P007, P008, P009, P010, P011, P012, P013 and P014 combined.

<u>Month(s)</u>	<u>Maximum Allowable Cumulative EPS resin usage (pounds)</u>
1	208,334
1-2	416,668
1-3	625,002
1-4	833,336
1-5	1,041,670
1-6	1,250,004
1-7	1,458,338
1-8	1,666,672
1-9	1,875,006
1-10	2,083,340
1-11	2,291,674
1-12	2,500,000

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

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- 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:
- $$[\text{pentane loss from each emissions unit (lb pentane/lb EPS resins)} \times \text{the actual EPS resin usage rate from C.2.a. (lbs of EPS resin/month)} = \text{tons OC (pentane)/month.}$$
- d. The total OC emissions (pentane) in tons, for the rolling, 12-month period.
3. The permit to install for this emissions unit P014 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

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

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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.

4. 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:
 - a. Emission limitation:
The organic compound (OC) (pentane) emissions from this emissions unit shall not exceed 21.0 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 (1050 lbs EPS resin/hr) times the pentane emission factor (0.02 lb pentane emissions/lb EPS), as certified by the manufacturer (HIRSCH Maschinenbau 9/13/2005).
 - b. 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.
2. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emissions testing shall be conducted 6 months after permit issuance and/or operation.
 - b. The emission testing shall be conducted to demonstrate compliance with the loss percentages of pentane from the pre-expanders, molding machines, aging bags and warehouse.
 - c. The emission testing shall be conducted using industry acceptable test methods.
 - d. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA District Office or RAPCA.

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- e. Not later than 60 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and dates(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the field office's refusal to accept the results of the emissions test(s).
- f. Personnel from the Ohio EPA District Office or RAPCA shall be permitted to witness the test(s), examine the testing equipment and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA District Office or RAPCA within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or RAPCA.

F. Miscellaneous Requirements

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