State of Ohio Environmental Protection Agency

RE: FINAL PERMIT TO INSTALL **CERTIFIED MAIL**
FRANKLIN COUNTY

Street Address:
122 S. Front Street

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

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049

Application No: 01-12022
Fac ID: 0125182441
DATE: 5/2/2006

Insulfoam
Shawn Osler
1019 Pacific Ave Suite 1501
Tacoma, WA 98402

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

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.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern

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

CC: USEPA **CDO**

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install	**Issue Date: 5/2/2006**
Terms and Conditions	**Effective Date: 5/2/2006**

FINAL PERMIT TO INSTALL 01-12022

Application Number:	01-12022
Facility ID:	0125182441
Permit Fee:	**$2625**
Name of Facility:	Insulfoam
Person to Contact:	Shawn Osler
Address:	1019 Pacific Ave Suite 1501 Tacoma, WA 98402

Location of proposed air contaminant source(s) [emissions unit(s)]:
4849 Groveport Rd
Obetz, **Ohio**

Description of proposed emissions unit(s):
Preexpander.

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

Joseph P. Koncelik

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit-To-Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

i. The date, place (as defined in the permit), and time of sampling or measurements.

ii. The date(s) analyses were performed.

iii. The company or entity that performed the analyses.

iv. The analytical techniques or methods used.

v. The results of such analyses.

vi. The operating conditions existing at the time of sampling or measurement.

b. 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.

c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to

the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification

b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

d. This permit does not convey any property rights of any sort, or any exclusive privilege.

e. 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be

kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or

required under this permit.

iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit-To-Operate Application

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be <u>obtained before</u> the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this permit is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. 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 source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

12. 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.

13. Permit-To-Install

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in this permit.

B. State Only Enforceable Permit-To-Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit 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 of state-only enforceable 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 state-only required 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 (i.e., postmarked) quarterly, 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. 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.

4. Authorization To Install or Modify

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit 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.

5. Construction of New Sources(s)

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

6. 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.

7. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

8. Construction Compliance Certification

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. 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

Pollutant	Tons Per Year
OC	172.3
CO	38.5

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

1. The combined facility-wide stack and fugitive organic compound (OC) emissions from emissions units P002, P003, P004, P005, P006 and P007 shall not exceed 172.3 tons OC as a rolling, 12- month summation.

2. Carbon monoxide (CO) emissions from the RTO stack shall not exceed 8.8 pounds per hour and 38.5 tons per year.

3 The operational restrictions that establish the federally enforceable limitations for emission units P002, P003, P004, P005 and P006 are as follows:

   a. the permittee shall capture 100% of all OC emissions from the enclosed expanded resin bead aging bag farm, identified as emissions unit P004, with venting to the regenerative thermal oxidizer (RTO) that achieves a minimum 95% destruction of OC emissions;

   b. the permittee shall capture a minimum 70%, combined, of all OC emissions from the two pre-expanders identified as emission units P002 and P003, and from the two block mold machines identified as emission units P005 and P006, respectively, with venting to the RTO that achieves a minimum 95% destruction of OC; and

   c. the average combustion temperature within the regenerative thermal oxidizer, for any 3-hour block of time when the emissions units are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit to be in compliance.

4. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the regenerative thermal oxidizer when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer’s recommendations, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information for each day:

a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer, when the emissions unit were in operation, was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit to be in compliance; and

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit were in operation.

5. The permittee shall maintain a monthly record of OC emissions, as calculated monthly and maintained on-site, that document compliance with the restriction to the potential to emit as depicted in term A.1 above for emission units identified as: P002, P003, P004, P005, P006 and P007:

   a. the calculated OC emission rate for the current month, in pounds or tons; and

   b. the rolling, 12-month summation of OC emissions, in pounds or tons (i.e., the OC emissions calculated for the current month added to the summation of the previous 11 months);

6. The permittee shall submit quarterly deviation (excursion) reports which identify deviations (excursions) of the following emission limitations and operational restrictions:

   a. all 3-hour blocks of time during which the average combustion temperature within the thermal oxidizer does not comply with the temperature limitation specified in this permit, and

   b. all exceedances of the rolling, 12-month OC emission limitation in section A.1 above.

   The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

7. Compliance with the emission limitation in Part II, section A.1 of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation:
   The combined OC emissions from P002, P003, P004, P005, P006 and P007 shall not exceed 172.3 tons as a rolling, 12 - month summation.

   Applicable Compliance Method:
   Compliance shall be demonstrated by the record keeping requirements specified in Part II, section A.6 of this permit.

b. Emission Limitation:
CO emissions from the RTO stack shall not exceed 8.8 pounds per hour (200ppmv) as a 3-hour average and 38.5 tons per year.

Applicable Compliance Method:
This emission limitation was established by emission testing conducted on 8/24/2004 at the outlet of an RTO controlling pentane emissions from processing EPS resin beads at a similar facility.

Compliance with the annual limitation shall be assumed because the emission is based on the maximum potential to emit of the RTO.

8. This permit to install shall cover the following emissions units: pre-expanders 1 and 2 (P002 and P003), the enclosed resin bead aging area (emissions unit P004), the block mold machines 1 and 2 (emissions units P005 and P006) and the existing storage area (emissions unit P007).

The permittee shall install a system of duct work from the 2 pre-expanders (emissions units P002 and P003) and the 2 block molding machine vacuum tanks (emissions units P005 and P006) that vent to the regenerative thermal oxidizer (RTO), resulting in 70% destruction of the combined OC emissions from these emissions units. The permittee shall install and maintain a permanent total enclosure (PTE) around the existing pre-puff aging area with venting of 100% of captured OC emissions to the RTO.

This modification is required for the purpose of netting out of the Non-Attainment New Source Review and corresponding Ohio Administrative Code (OAC) regulations for volatile organic compounds (VOC) with the installation of an RTO that achieves an overall 85% destruction of OC emissions and would allow an increase from 15, 848,050 pounds at 4.5% pentane content resin beads to annual throughput 29,492,693 pounds at 4.5% pentane content resin beads. In order to verify that the emission from the PTE surrounding the pre-puff aging area do not exceed the emissions described in the netting table below prior to increasing the annual throughput of EPS resin beads, the permittee must comply with the following limitation:

172.3 tons VOC per rolling, 12-month period from emissions units P002, P003, P004, P005, P006 and P007.

The permittee shall keep sufficient records to demonstrate that this requirement is being met.

The following tables include all emissions units at Insulfoam that are being used to demonstrate that the project results in less than a significant net emissions increase in VOC emissions for the entire facility. The contemporaneous time period is from June, 2003 - May, 2005. The period begins five years prior to the start of the construction project, which is scheduled to occur in 2006. The end of the contemporaneous period is when the project will begin normal operation, which is planned for April 2006.

Table of Insulfoam Past Actual VOC Emission During 2 Year Period

Source ID	PTI #	Source Description	Date of PTI	Years of Actual Emission	Avg 2 Yr Actual Emissions (TPY)
P002	01-08907	Pre-expander #1	7/19/2005	N/A	31.1
P003	01-08907	Pre-expander #2	7/19/2005	N/A	N/A
P004	01-08907	Aging bag farm	7/19/2005	N/A	61.4
P005	01-08907	Block Molder #1	7/19/2005	N/A	35.5
P006	01-08907	Block Molder #2	7/19/2005	N/A	N/A
P007	01-08907	Storage/post production fugitives	7/19/2005	N/A	19.2
P001	01-08375	EPS processing line	10/4/2001	2003 - 2005	147.8

* The two year average of actual emissions are based on uncontrolled emissions from June 2003 through May 2005 for the combined emissions units permitted initially permitted as P001. These annual emissions reflect an uncontrolled emission rate prior to the issuance of PTI 01-08907 and the installation and operation of emission units P003, P004 (PTE) and P006.

Summary Table of All VOC Reductions and Increases Considered as a Part of Installing the PTE) on the Resin Bead Prepuff Aging Area (emissions unit P004) with Total Net Emissions Change

Summary of Changes	**Net Emissions Change (TPY)**
Restricted emission for all sources under the new permit	172.3
Past Actual emissions (June 2003 - May 2005)	147.8
Total Emissions Change	**24.5**
NSR Significant Emissions Level	40

The permittee shall notify the Ohio EPA, Central District Office, upon initiation of production in the new pre-expander and block molding machine.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

1. The permit to install for these emissions units (P002, P003, P004, P005, P006 and P007) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units 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 summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: Pentane
   TLV (mg/m3): 1,770
   Maximum Hourly Emission Rate (lbs/hr): 198.6
   Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 33,491
   MAGLC (ug/m3): 42,142

   Physical changes to or changes in the method of operation of the emissions units after their installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

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

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.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P002 - Hirsch 12000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 28.9 tons per year. The requirements established pursuant to this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period. The usage of beads is restricted by term

A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (1.64 pounds stack and 14.04 pound fugitive per hour) are based on the potential to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with these emission limitations.

II. Operational Restrictions

1. The combined rolling, 12-month resin bead usage for emissions units P002 and P003 shall be restricted in accordance with the following equation:

$$28.9 \geq [(Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(1- CE)]$$

where,

n = each resin bead lot (batch) "n" processed in that 12-month period;
Wn = the total weight of each resin bead lot (batch), in pounds per rolling 12-month period;
Pn = the pentane content for each resin bead lot (batch), in percent, by weight (from the corresponding certificate of analysis);
En = the pentane content emitted per resin bead lot (batch) (12 percent);
CE = capture efficiency (0.7); and
DE = destruction efficiency (0.95).

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain the following information for each day:

   a. The total weight of each type of EPS resin bead processed in emissions unit P002, in pounds.

   b. The corresponding pentane content for each type of EPS resin bead processed in emissions unit P002, in percent, by weight.

   c. The total weight of each type of EPS resin bead processed in emissions unit P003, in pounds.

   d. The corresponding pentane content for each type of EPS resin bead processed in emissions unit P003, in percent, by weight.

2. The permittee shall record and maintain the following information on a monthly basis:

a. The total weight of each type of EPS resin bead processed in emissions unit P002, in pounds.

b. The total weight of each type of EPS resin bead processed in emissions unit P003, in pounds.

c. The total weight of each type of EPS resin bead processed in both emissions units P002 and P003 combined during the most recent rolling, 12-month period.

d. The corresponding pentane content for each type of EPS resin bead processed in both emissions units P002 and P003, in percent, by weight.

e. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

f. A calculation of the total OC emissions (pentane) from each bead type used in emissions units P002 and P003 during the rolling, 12-month period (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.13 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

g. A calculation of the total OC emissions (in tons) for all bead types used in emissions units P002 and P003 during the rolling, 12-month period (the sum of the results of paragraph f. above for all bead types divided by 2000 lbs/ton).

3. The permittee shall collect and record the following information for the purpose of determining annual organic compound emissions:

a. The total weight of each type of aged resin bead material processed in emissions unit P002, in pounds.

b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P002, in percent, by weight.

c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

d. A calculation of the total OC emissions (pentane) from each bead type used in emissions unit P002 during the year (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.13 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

e. A calculation of the total OC emissions (in tons) for all bead types used in emissions unit P002 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling, 12-month bead usage equation (term A.II.1) for emissions units P002 and P003.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 28.9 tons of OC as a rolling, 12-month emission summation for emissions units P002 and P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 shall be determined in accordance with the following methods:

   a. Emission Limitation:
   OC emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour.

   Applicable Compliance Method:
   This emission limitation was established by multiplying the emissions unit's maximum hourly resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the pre-expansion process (E) by the capture efficiency (CE) and by 1 minus the destruction efficiency (1 - DE); as follows:

   6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 pentane emitted (E) multiplied by 0.7 (CE) and multiplied by 0.05 (1 - DE) = 1.64 lbs of OC/hr.

   *Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

Upon request by Ohio EPA, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with mass balance protocol specified in the State of California South Coast Air Quality Management District (SCAQMD) Method 306-91 titled "Analysis of Pentanes in Expandable Styrene Polymers", as modified by Huntsman procedure QAL-1-021 titled "Pentane By GC". Copies of these procedures have been provided by the permittee to the Ohio EPA, Central District Office (CDO). Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA, CDO.

b. Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the emissions unit's maximum hourly resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the pre-expansion process (E) by 1 minus the capture efficiency (1 - CE); as follows:

6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 pentane emitted (E) multiplied by 0.3 (1 - CE) = 14.04 lbs of OC/hr.

*Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

c. Emission Limitation:
OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

d. Emission Limitation:
The combined rolling, 12-month resin bead usage restriction for emissions units P002 and P003 shall not result in OC emissions that exceed 28.9 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P002 - Hirsch 12000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - Idro PJX 4000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 28.9 tons per year. The requirements established pursuant to this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period. The usage of beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (1.64 pounds stack and 14.04 pound fugitive per hour) are based on the potential to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with this emission limitation.

II. Operational Restrictions

1. The combined rolling, 12-month resin bead usage for emissions units P002 and P003 shall be restricted in accordance with the following equation:

$$28.9 \geq [(Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(1- CE)]$$

where,

n = each resin bead lot (batch) "n" processed in that 12-month period;
Wn = the total weight of each resin bead lot (batch), in pounds per rolling 12-month period;
Pn = the pentane content for each resin bead lot (batch), in percent, by weight (from the corresponding certificate of analysis);
En = the pentane content emitted per resin bead lot (batch) (12 percent);
CE = capture efficiency (0.7); and
DE = destruction efficiency (0.95).

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain the following information for each day:

a. The total weight of each type of EPS resin bead processed in emissions unit P002, in pounds.

b. The corresponding pentane content for each type of EPS resin bead processed in emissions unit P002, in percent, by weight.

c. The total weight of each type of EPS resin bead processed in emissions unit P003, in pounds.

d. The corresponding pentane content for each type of EPS resin bead processed

in emissions unit P003, in percent, by weight.

2. The permittee shall record and maintain the following information on a monthly basis:

   a. The total weight of each type of EPS resin bead processed in emissions unit P002, in pounds.

   b. The total weight of each type of EPS resin bead processed in emissions unit P003, in pounds.

   c. The total weight of each type of EPS resin bead processed in both emissions units P002 and P003 combined during the most recent rolling, 12-month period.

   d. The corresponding pentane content for each type of EPS resin bead processed in both emissions units P002 and P003, in percent, by weight.

   e. The results of the calculation utilizing the equation found in term A.II.1. showing that the bead restriction complies with the equation.

   f. A calculation of the total OC emissions (pentane) from each bead type used in emissions units P002 and P003 during the rolling, 12-month period (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.13 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

   g. A calculation of the total OC emissions (in tons) for all bead types used in emissions units P002 and P003 during the rolling, 12-month period (the sum of the results of paragraph f. above for all bead types divided by 2000 lbs/ton).

3. The permittee shall collect and record the following information for the purpose of determining annual organic compound emissions:

   a. The total weight of each type of aged resin bead material processed in emissions unit P003, in pounds.

   b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P003, in percent, by weight.

   c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

   d. A calculation of the total OC emissions (pentane) from each bead type used in emissions unit P003 during the year (pounds of beads processed times the

pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.13 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

e. A calculation of the total OC emissions (in tons) for all bead types used in emissions unit P003 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling, 12-month bead usage equation (term A.II.1) for emissions units P002 and P003.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the 28.9 ton OC as a rolling, 12-month emission limit for emissions units P002 and P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 shall be determined in accordance with the following methods:

   a. Emission Limitation:
   OC emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour.

   Applicable Compliance Method:
   This emission limitation was established by multiplying the emissions unit's maximum hourly resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the pre-expansion process (E) by the capture efficiency (CE) and by 1 minus the destruction efficiency (1 - DE); as follows:

   6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 pentane emitted (E) multiplied by 0.7 (CE) and multiplied by 0.05 (1 - DE) = 1.64 lbs of OC/hr.

   *Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

Upon request by Ohio EPA, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with mass balance protocol specified in the State of California South Coast Air Quality Management District (SCAQMD) Method 306-91 titled "Analysis of Pentanes in Expandable Styrene Polymers", as modified by Huntsman procedure QAL-1-021 titled "Pentane By GC". Copies of these procedures have been provided by the permittee to the Ohio EPA, Central District Office (CDO). Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA, CDO.

b. Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour.

Applicable Compliance Method:
This emission limitation was established by multiplying the emissions unit's maximum hourly resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the pre-expansion process (E) by 1 minus the capture efficiency (1 - CE); as follows:

6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 pentane emitted (E) multiplied by 0.3 (1 - CE) = 14.04 lbs of OC/hr.

*Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

c. Emission Limitation:
OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

d. Emission Limitation:
The combined rolling, 12-month resin bead usage restriction for emissions units P002 and P003 shall not result in OC emissions that exceed 28.9 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P003 - Idro PJX 4000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - Enclosed expanded resin bead aging bag farm vented to RTO. Includes emissions from transfer and aging. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	OC emissions in the RTO stack from this emissions unit shall not exceed 5.85 pounds per hour. See sections A.I.2.a below. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack) from this emissions unit shall not exceed 8.3 tons per rolling, 12-month period. The usage of beads is restricted by term A.II.2.b and term A.II.2 below.

2. Additional Terms and Conditions

2.a The permittee shall capture 100% of the pentane emissions from the expanded resin bead aging enclosure and vent the captured emissions to the RTO which will achieve a 95% control (destruction) efficiency of the captured pentane emission during EPS production.

2.b The annual emission limitations for this emissions unit were established based upon the restricted rolling, 12-month bead usage limitation for the pre-expanders (emissions units P002 and P003).

II. Operational Restrictions

1. This emissions unit shall be totally enclosed such that OC emissions are captured and contained for discharge through the regenerative thermal oxidizer. The permittee shall demonstrate compliance with the following criteria, identified by USEPA Method 204, to satisfy the total enclosure requirement:

   a. Any natural draft opening (NDO) shall be at least four equivalent opening diameters from each OC emitting point unless otherwise specified by the Administrator.

   b. The total area of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor, and ceiling.

   c. The average facial velocity (FV) of air through all NDO's shall be at least 3,600 m/hr (200 fpm). The direction of air flow through all NDO's shall be into the enclosure. Alternatively the enclosure may be maintained at a minimum of 0.007 inches of water across the enclosure. A pressure differential of 0.007 inches of water corresponds to a FV of 3,600 m/hr (200 fpm). (M204 5.4 and 8.3)

   d. All access doors and windows whose areas are not included in section (b) and are not included in the calculation in section (c) shall be closed during routine operation of the process.

2. The annual aged resin bead material usage for this emissions unit is restricted by the bead usage restriction for emissions units P002 and P003. No beads other than those processed through emissions units P002 and P003 may be processed through this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall install, maintain and operate a monitoring device which measures the differential pressure between the inside and outside of the permanent total enclosure. The monitoring device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

   The permittee shall record the pressure differential of the permanent total enclosure during each three hour block of time to ensure that it is maintained at a minimum of

0.007 inches of water. The permittee shall record the duration, cause and all corrective actions taken, when the observed differential pressure is less than 0.007 inches of water.

2. The permittee shall record and maintain the following information for each day:

   a. The total weight of EPS (expanded polystyrene) resin beads processed in emissions unit P004, in pounds.

   b. The total hours emissions unit P004 operated.

   c. The average pound of EPS resin beads processed per hour (a. above divided by b. above).

3. The permittee shall record and maintain the following information on a monthly basis:

   a. The total weight of each type of EPS resin bead processed in emissions unit P004, in pounds.

   b The corresponding pentane content for each type of EPS resin bead processed in emissions units P004, in percent, by weight.

   c. A calculation of the total OC emissions (pentane) produced from each bead type used in emissions unit P004 during the rolling, 12-month period (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.27 for high pentane, 0.25 for mid pentane and 0.21 for low pentane in pound of pentane produced in the aging bag farm/lb pentane in the original bead).

   d. A calculation of the total OC emissions (in tons) produced for all bead types used in emissions unit P004 during the rolling, 12-month period (the sum of the results of paragraph c. above for all bead types divided by 2000 lbs/ton).

   e. The calculated, controlled stack OC emissions for all EPS resin beads aged in this emissions unit, in tons (i.e., the value from (A.III.3.d) times the overall control efficiency from the most recent emission tests that demonstrated that the emissions unit was in compliance - an overall control efficiency of 1 - 0.95 (1 - (100% capture x 95% control)) shall be used for this calculated emission rate until the initial compliance demonstration is performed).

   f. A log or record of downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions unit was in operation.

g. The total weight of any EPS resin bead processed that was not initially processed in emissions units P002 or P003.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

   a. All periods of time during which the expanded resin bead aging enclosure was not maintained at the required differential pressure specified above.

   b. All periods of downtime for the capture (collection) system, control device, and monitoring equipment when this emissions unit was in operation.

   c. Any exceedance of the rolling, 12-month OC emission limitations for this emissions unit.

   d. Any exceedance of the restriction to process only ESP resin beads that were initially processed in P002 or P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I. shall be determined in accordance with the following methods:

   a. Emission Limitation:
   OC emissions in the RTO stack from this emissions unit shall not exceed 5.85 pounds per hour.

   Applicable Compliance Method:
   This emission limitation was established by multiplying the maximum hourly weight of the EPS resin contained in the aging enclosure (80,000 lbs) by the maximum pentane content of the EPS resin beads aged in this emissions unit (0.065 lb pentane per pound of resin bead) by the pentane emission factor (0.27 lb OC emitted/lb pentane/12 hours aging) by the aging enclosure capture efficiency (1.0) by the control (destruction) efficiency of the RTO (1 - 0.95) = 5.85 lbs of OC/hr.

   Compliance with this emission limitation shall be demonstrated through the emission testing requirements specified in A.V.2 below.

b. Emission Limitation:
OC emissions in the RTO stack from this emissions unit shall not exceed 8.3 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

c. Emission Limitations:
The permittee shall capture 100% of the pentane emissions from the expanded resin bead aging enclosure and vent the captured emissions to the RTO which will achieve a 95% control (destruction) efficiency of the captured pentane emission during EPS production.

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

The emission testing shall be conducted within 60 months days following startup of emissions unit P003 and this emissions unit and completion of ductwork to the RTO.

The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency requirements, and the mass emission limitation for organic compounds.

The following test method(s) shall be employed to demonstrate compliance with the allowable organic compound mass emission limitation(s): 40 CFR Part 60, Appendix A, Methods 1 through 4 and 18, 25 or 25A, as appropriate. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency requirements are specified below. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

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, Central District Office.

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995 or in accordance with methods and procedures approved by the Ohio EPA. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may

approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(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 Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District Office 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.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office 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 Ohio EPA, Central District Office.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P004 - Enclosed expanded resin bead aging bag farm vented to RTO. Includes emissions from transfer and aging.(Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P005 - Idro 24-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 2.34 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 19.89 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 35.6 tons per year. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period. The usage of resin beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (2.34 pounds stack and 19.89 pounds fugitive emissions per hour) are based on the potential to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with this emission limitation.

2.b The annual emission limitations for this emissions unit were established based upon the restricted rolling, 12-month bead usage limitation for the pre-expanders (emissions units P002 and P003).

II. Operational Restrictions

1. The combined rolling, 12-month resin bead usage for emissions units P005 and P006 shall be restricted in accordance with the following equation:

$$35.6 \geq [(Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(1- CE)]$$

where,

n = each resin bead lot (batch) "n" processed in that 12-month period;
Wn = the total weight of each resin bead lot (batch), in pounds per rolling 12-month period;
Pn = the pentane content for each resin bead lot (batch), in percent, by weight (from the corresponding certificate of analysis);
En = the pentane content emitted per resin bead lot (batch) (12 percent);
CE = capture efficiency (0.7); and
DE = destruction efficiency (0.95).

2. No beads other than those processed through emissions units P002 and P003 may be processed through this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain the following information for each day:

   a. The total weight of each type of aged resin bead material processed in emissions unit P005, in pounds.

b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P005, in percent, by weight.

c. The total weight of each type of aged resin bead material processed in emissions unit P006, in pounds.

d. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P006, in percent, by weight.

2. The permittee shall record and maintain the following information on a monthly basis:

a. The total weight of each type of EPS resin bead processed in both emissions units P005 and P006 combined during the most recent rolling, 12-month period.

b. The corresponding pentane content for each type of EPS resin bead processed in both emissions units P005 and P006, in percent, by weight.

c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

d. A calculation of the total OC emissions (pentane) from each bead type used in emissions units P005 and P006 during the rolling, 12-month period (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.16 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

e. A calculation of the total OC emissions (in tons) for all bead types used in emissions units P005 and P006 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

3. The permittee shall collect and record the following information for the purpose of determining annual organic compound emissions:

a. the total weight of each type of aged resin bead material processed in emissions unit P005, in pounds.

b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P005, in percent, by weight.

c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

d. A calculation of the total OC emissions (pentane) from each bead type used in emissions unit P005 during the year (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor

(e.g. 0.12 for high pentane, 0.16 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

e. A calculation of the total OC emissions (in tons) for all bead types used in emissions unit P005 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

   a. Any exceedance of the rolling, 12-month OC emission limitation for emissions units P005 and P006.

   b. Any exceedance of the combined rolling, 12-month resin bead usage for emissions units P005 and P006.

   c. Any exceedance of the restriction to process only EPS resin beads that were initially processed in P002 or P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 shall be determined in accordance with the following methods:

   a. Emission Limitation:
   OC emissions in the RTO stack from this emissions unit shall not exceed 2.34 pounds per hour.

   Applicable Compliance Method:

Emissions Unit ID: P005

This emission limitation was established by multiplying the emissions unit's maximum hourly aged resin bead material usage weight (W), in pounds, by the maximum pentane content of the aged resin bead material, in percent by weight (P) by the average percentage of pentane lost (emitted) during the block molding process (E)by the capture efficiency (CE) and by 1 minus the destruction efficiency (DE); as follows:

6,000 lbs of aged resin bead material per hour (W) multiplied by 0.065 lb of pentane per pound of aged resin bead material (P) by 0.12 pentane emitted (E) by 0.7 (CE) and by 0.05 (1 - DE) = 2.34 lbs of OC/hr.

*Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

Upon request of Ohio EPA, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with mass balance protocol specified in the State of California South Coast Air Quality Management District (SCAQMD) Method 306-91 titled "Analysis of Pentanes in Expandable Styrene Polymers", as modified by Huntsman procedure QAL-1-021 titled "Pentane By GC". Copies of these procedures have been provided by the permittee to the Ohio EPA, Central District Office (CDO). Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA, CDO.

b. Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 19.89 pounds per hour.

Applicable Compliance Method:
This emission limitation was derived by multiplying the emissions unit's maximum hourly aged resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the block mold process (E) by 1 minus the capture efficiency (CE); as follows:

6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.17 pentane emitted (E) multiplied by 0.3 (1 -CE) = 19.89 lbs of OC/hr.

c. Emission Limitation:
OC emissions (stack and fugitive) from emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

d. Emission Limitation:
This emissions unit shall not process any more resin beads per rolling, 12-month period than is limited by the equation in term A.II.1. No beads other than those processed through emissions units P002 and P003 may be processed through this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P005 - Idro 24-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - Idro 24-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 2.34 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 19.89 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 35.6 tons per year. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period. The usage of resin beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (2.34 pounds stack and 19.89 pounds fugitive emissions per hour) are based on the potential to emit for this emissions unit.

Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with this emission limitation.

2.b The annual emission limitations for this emissions unit were established based upon the restricted rolling, 12-month bead usage limitation for the pre-expanders (emissions units P002 and P003).

II. Operational Restrictions

1. The combined rolling, 12-month resin bead usage for emissions units P005 and P006 shall be restricted in accordance with the following equation:

$$35.6 \geq [(Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1\ ton/2000\ pounds)(1- CE)]$$

where,

n = each resin bead lot (batch) "n" processed in that 12-month period;
Wn = the total weight of each resin bead lot (batch), in pounds per rolling 12-month period;
Pn = the pentane content for each resin bead lot (batch), in percent, by weight (from the corresponding certificate of analysis);
En = the pentane content emitted per resin bead lot (batch) (12 percent);
CE = capture efficiency (0.7); and
DE = destruction efficiency (0.95).

2. No beads other than those processed through emissions units P002 and P003 may be processed through this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain the following information for each day:

    a. The total weight of each type of aged resin bead material processed in emissions unit P005, in pounds.

    b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P005, in percent, by weight.

    c. The total weight of each type of aged resin bead material processed in emissions unit P006, in pounds.

    d. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P006, in percent, by weight.

2. The permittee shall record and maintain the following information on a monthly basis:

   a. The total weight of each type of EPS resin bead processed in both emissions units P005 and P006 combined during the most recent rolling, 12-month period.

   b. The corresponding pentane content for each type of EPS resin bead processed in both emissions units P005 and P006, in percent, by weight.

   c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

   d. A calculation of the total OC emissions (pentane) from each bead type used in emissions units P005 and P006 during the rolling, 12-month period (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.16 for mid pentane and 0.13 for low pentane in pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

   e. A calculation of the total OC emissions (in tons) for all bead types used in emissions units P005 and P006 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

3. The permittee shall collect and record the following information for the purpose of determining annual organic compound emissions:

   a. The total weight of each type of aged resin bead material processed in emissions unit P006, in pounds.

   b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P006, in percent, by weight.

   c. The results of the calculation utilizing the equation found in term A.II.1 showing that the bead restriction complies with the equation.

   d. A calculation of the total OC emissions (pentane) from each bead type used in emissions unit P006 during the year (pounds of beads processed times the pentane content (lb pentane/lb beads) times the relevant pentane emission factor (e.g. 0.12 for high pentane, 0.16 for mid pentane and 0.13 for low pentane in

pound of pentane emitted in the pre-expander/lb pentane in the original bead) utilizing the equation found in term A.II.1.

e. A calculation of the total OC emissions (in tons) for all bead types used in emissions unit P006 during the rolling, 12-month period (the sum of the results of paragraph d. above for all bead types divided by 2000 lbs/ton).

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify the following:

   a. Any exceedance of the rolling, 12-month OC emission limitation for emissions units P005 and P006.

   b. Any exceedance of the combined rolling, 12-month resin bead usage for emissions units P005 and P006.

   c. Any exceedance of the restriction to process only EPS resin beads that were initially processed in P002 or P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

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

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 shall be determined in accordance with the following methods:

   a. Emission Limitation:
   OC emissions in the RTO stack from this emissions unit shall not exceed 2.34 pounds per hour.

   Applicable Compliance Method:
   This emission limitation was established by multiplying the emissions unit's maximum hourly aged resin bead material usage weight (W), in pounds, by the maximum pentane content of the aged resin bead material, in percent by weight (P) by the average percentage of pentane lost (emitted) during the block molding process (E)by the capture efficiency (CE) and by 1 minus the destruction efficiency (DE); as follows:

   6,000 lbs of aged resin bead material per hour (W) multiplied by 0.065 lb of

pentane per pound of aged resin bead material (P) by 0.12 pentane emitted (E) by 0.7 (CE) and by 0.05 (1 - DE) = 2.34 lbs of OC/hr.

*Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

**Pentane losses in the EPS process are taken from BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight.

Upon request of Ohio EPA, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with mass balance protocol specified in the State of California South Coast Air Quality Management District (SCAQMD) Method 306-91 titled "Analysis of Pentanes in Expandable Styrene Polymers", as modified by Huntsman procedure QAL-1-021 titled "Pentane By GC". Copies of these procedures have been provided by the permittee to the Ohio EPA, Central District Office (CDO). Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA, CDO.

b. Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 19.89 pounds per hour.

Applicable Compliance Method:
This emission limitation was derived by multiplying the emissions unit's maximum hourly aged resin bead usage weight (W), in pounds, by the maximum pentane content of the resin beads, in percent by weight (P) by the average percentage of pentane lost (emitted) during the block mold process (E) by 1 minus the capture efficiency (CE); as follows:

6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.17 pentane emitted (E) multiplied by 0.3 (1 - CE) = 19.89 lbs of OC/hr.

c. Emission Limitation:
OC emissions (stack and fugitive) from this emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records

required pursuant to Section A.III. above.

d. Emission Limitation:
This emissions unit shall not process any more resin beads per rolling, 12-month period than is limited by the equation in term A.II.1. No beads other than those processed through emissions units P002 and P003 may be processed through this emissions unit.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P006 - Idro 16-foot block molding machine with vacuum system exhausted to the RTO. (4,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P007 - Product storage and processing. Includes emissions from hot wire cutting, grinding and storage. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from this emissions unit shall not exceed 58.0 pounds per hour. See section A.I.2.a below. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions from this emissions unit shall not exceed 99.54 tons per rolling, 12-month period. The usage of resin bead material is restricted by term A.II.1. below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitation (58.0 pounds per hour) is based on the maximum available space for product storage (2,000,000 lbs) multiplied by the maximum pentane content of 0.065 multiplied times the emission factor for pentane losses from product storage and processing (15% over 2 weeks), converted to an hourly emission rate divided by 336 (14 days * 24 hours/day).

2.b The annual emission limitation for this emissions unit was established based upon the restricted rolling, 12-month OC emission limitation for the pre-expanding operations (emissions units P002 and P003).

II. Operational Restrictions

1. This emissions unit shall not process any more resin bead material per rolling, 12-month period than is limited by the permits for P002 and P003. No bead material other than that processed through emissions units P002 and P003 may be processed through this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain the following information for each day:

   a. The total weight of each type of aged resin bead material processed in emissions unit P002 and P003, in pounds.

   b. The corresponding pentane content for each type of aged resin bead material processed in emissions unit P002 and P003, in percent, by weight.

2. The permittee shall record and maintain the following information on a monthly basis:

   a. The total OC emissions for all aged resin bead material processed in emissions unit P002 and P003, in pounds (i.e., the summation of the value(s) from (A.III.1.a) times the value(s) from A.III.1.b times the pentane emission factor of 0.15 for fugitive emissions released during storage for each type of aged resin bead material processed).

   b. The rolling, 12-month summation of the OC emissions for this emissions unit, in tons (i.e., the value from (A.III.2.a) plus the emissions from the previous 11 months).

   c. The total weight of any ESP resin bead material processed that was not initially processed in emissions units P002 or P003.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the rolling, 12-month OC emission limitation for this emissions unit.

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the combined rolling, 12-month resin bead usage for emissions units

P002 and P003.

3. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the restriction to process only ESP resin beads that were initially processed in P002 or P003.

   The quarterly deviation reports shall be submitted in accordance with General Term and Condition A.1.c.ii.

V. Testing Requirements

1. Compliance with the emission limitations in Section A.I.1 shall be determined in accordance with the following methods:

   a. Emission Limitation:

      OC emissions from this emissions unit shall not exceed 58.0 pounds per hour.

      Applicable Compliance Method:

      This emission limitation was established by multiplying the maximum hourly product storage capacity (W), in pounds, by the maximum pentane content of the resin bead material for the molded blocks, in percent by weight (P) by the percentage of pentane lost (emitted) during the storage and divided by the number of hours of the in two weeks (E); as follows:

      2,000,000 lbs of resin bead material stored (W) multiplied by 0.065 lb of pentane per pound of resin bead material for the molded blocks (P) by 0.15 pentane emitted in two weeks, divided by 336 hours in two weeks (E) as depicted in term A.I.1 = 58.0 lbs of OC/hr.

      *Pentane is the only OC emitted from the expandable polystyrene (EPS) process.

      **Pentane losses in the EPS process were derived from a BASF Technical Bulletin N-840 for Styropor EPS, November, 1996 for percentage of pentane lost at during storage (8%) from pentane impregnated EPS 326 resin at an initial pentane content of 6.1%, by weight, to a residual pentane content of 3.0 %, by weight. The emission factor was increased to 15% to account for variations in pentane emission releases during molded block storage and processing, as determined based on mass balance testing at Insulfoam facilities.

Upon request by Ohio EPA, the permittee shall demonstrate compliance with the hourly OC emission limitation in accordance with mass balance protocol specified in the State of California South Coast Air Quality Management District (SCAQMD) Method 306-91 titled "Analysis of Pentanes in Expandable Styrene Polymers", as modified by Huntsman procedure QAL-1-021 titled "Pentane By GC". Copies of these procedures have been provided by the permittee to the Ohio EPA, Central District Office (CDO). Alternative U.S. EPA- approved test methods may be used with prior approval from Ohio EPA, CDO.

b. Emission Limitation:
OC emissions from this emissions unit shall not exceed 99.54 tons per rolling, 12-month period.

Applicable Compliance Method:
Compliance with this emission limitation shall be demonstrated by the records required pursuant to Section A.III. above.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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.

Operations, Property, and/or Equipment	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
P007 - Product storage and processing. Includes emissions from hot wire cutting, grinding and storage. (Terms in this permit supersede those identified in PTI 01-08907 issued on 7/19/2005 for this emissions unit.)	None	None

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None