

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

Permit To Install 01-08375 Insulfoam

A. **Source Description:**

The EPS production line includes a steam activated pre-expansion chamber and dryer, 20-3,500 lb aging bags, and a 24 foot steam activated block mold machine to form large blocks of foam. Foam blocks may be stored or subsequently processed using hot wire cutters or a heated laminator for applying aluminum sheet.

B. **Facility Emissions and Attainment Status:**

Pentane is the sole organic compound emitted from the EPS production line. At the maximum annual potential production rate of 48,180,000 tons of resin beads and a median pentane content 6.5% by weight, the maximum potential to emit (PTE) would be 923.85 ton OC/yr. Franklin County is an attainment area for all criteria pollutants.

C. **Source Emissions**

The maximum hourly emission rate was calculated based on sole usage of 6.5% pentane content resin bead processed at 6,000 lb/hr. The proposed 230.1 lb OC/hr emission rate is a summation of 46.8 lb stack emission from the pre-expansion chamber, 105.3 lb fugitive emission from aging bags, 46.6 lb stack emission from the block molding operation, and 31.2 lb fugitive emission from cutting and storage. Premier Industries proposes to restrict production to maintain annual OC emissions below both the both the PSD review threshold and BAT cost effectiveness by employing a mixture of median content resin beads for low (3.5% pentane/wt), mid (4.5% pentane/wt), and high (6.5% pentane) content resin beads. The application proposes to restrict annual production to result in maximum annual emission of 172.3 ton OC/yr under three resin usage scenarios ranging from 8,500,000 pounds of 6.5% median pentane content resin beads to 17,900,000 pounds resin beads with a content of 4.5% pentane content by weight.

D. **Conclusion**

Insulfoam will maintain the annual emission below 172.3 ton organic compound per year through restricted resin beads usages. EPS foam production from pentane impregnated beads is not listed as one of the 28 category PSD rule list and so will not be required to install BAT control to reduce OC emissions below 100 tons per year.



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL
FRANKLIN COUNTY

CERTIFIED MAIL

Street Address:

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

Mailing Address:
Lazarus Gov.
Center

Application No: 01-08375

DATE: 7/17/2001

Insulfoam
Lynn Finley
1019 Pacific Ave Suite 1501
Tacoma, WA 98402

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$1200 will be due. Please do not submit any payment now.

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

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

CDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install
Terms and Conditions

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

DRAFT PERMIT TO INSTALL 01-08375

Application Number: 01-08375
APS Premise Number: 0125182441
Permit Fee: **To be entered upon final issuance**
Name of Facility: Insulfoam
Person to Contact: Lynn Finley
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):
EPS Block Processing Line.

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Insulfoam

Facility ID: 0125182441

PTI Application: 01-08375

Issued: To be entered upon final issuance

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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.10 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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. 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.

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.

Insulfoam**Facility ID: 0125182441****PTI Application: 01-08375****Issued: To be entered upon final issuance****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 reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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 this Permit To Install.

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 of 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, the State, and citizens 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

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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 obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule

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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 To Install 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 thirty (30) 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.

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

1. Compliance Requirements

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

2. Reporting Requirements Related to Monitoring and Recordkeeping 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 quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. 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. 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.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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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.

6. Construction of New Sources(s)

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

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

7. 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.

8. 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).

Insulf

PTI A

Emissions Unit ID: P001

Issued: To be entered upon final issuance**9. Construction Compliance Certification**

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

10. 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., 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**

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	172.3

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Insulf

PTI A

Emissions Unit ID: P001

Issued: To be entered upon final issuance

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

**Insulf
PTI A**

Emissions Unit ID: P001

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - EPS foam block processing line with preexpansion, aging and molding (6,000 lb/hr)	OAC rule 3745-31-05(A)(3)	Organic compound emissions shall not exceed 230.1 pound per hour and 172.3 tons per rolling twelve month period. See A.I.2.a. and A.II.1., below. The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G) and OAC rule 3745-17-07(A)(1).
	OAC rule 3745-21-07(G)	See A.I.2.b., below.

2. Additional Terms and Conditions

- 2.a The short term limitation of 230.1 lb organic compound per hour was established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limit.
- 2.b To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

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II. Operational Restrictions

1. The maximum annual production rate shall not exceed any of the following resin bead usages during any rolling twelve-month period:
 - a. 8,500,000 pounds of EPS resin beads at a median pentane content of 6.5% by weight;
 - b. 13,000,000 pounds of EPS resin beads at mixed pentane content represented by 3,250,000 pounds at a median pentane content of 6.5% by weight, 3,724,500 pounds at a median pentane content of 4.5% by weight, and 6,025,500 pounds at a median pentane content of 4.5% by weight; and
 - c. 17,900,000 pounds of EPS resin beads at a median pentane content of 3.5% by weight;.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain the following information for each day that the EPS process line is operated in a daily record:
 - a. the weight with corresponding MSDS identification of each batch of EPS resin bead conveyed into the pre-expansion chamber;
 - b. the total weight of each type of EPS resin bead with corresponding MSDS identification fed into the pre-expansion chamber during each daily period, as summarized from records in A. III.1.a., above; and
 - c. a record for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
2. The permittee shall maintain the following information for each month of EPS production in a monthly record, to be summarized for each monthly period:
 - a. a summation of total daily weight with corresponding MSDS identification for each type of EPS resin bead, as processed during the current monthly period, as recorded in A.III.2.b., above;
 - b. a summation for the rolling 12-month period of the total monthly weights for each type of EPS resin bead with corresponding MSDS processed during the previous year; and
 - c. a record of each exceedance of the rolling twelve-month usage restrictions and respective

Insulfoam**PTI Application: 01 00275****Issued****Facility ID: 0125182441**

Emissions Unit ID: P001

percent by weight of EPS resin beads specified in A.II.1., above, as for example, the total weight of all resin beads processed exceeds 8,500,000 pounds specified in A.II.1.a., above, then did the total weight of resin beads with a median pentane content of 6.5% exceed 3,250,000 pounds in A.II.1.c., above, and so forth.

IV. Reporting Requirements

1. In accordance with paragraph A.1.2.ii. of the General Terms and Conditions, the permittee shall submit quarterly deviation(excursion) reports for the following:
 - a. exceedance of any rolling-twelve month EPS resin bead usage restriction identified in A.II.1., above, as determined by record keeping in A.III.2.c., above;
 - b. all periods of time when a photochemically reactive material is employed in this emissions unit as determined by record keeping in A.III.1.c. above, and
 - c. each quarterly report shall include the date of each exceedance, the type of exceedance and resultant increases in organic compound emissions, as well as any corrective actions that were taken to return to compliance.

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:
Organic compound emissions shall not exceed 230.1 pound per hour

Applicable Compliance Method:

Compliance shall be demonstrated by summation of calculated pentane emissions based on analysis of emissions from resins with an initial pentane content of 6.1% by weight to a residual pentane content of 3.0 % by weight, as follows:

pre-expansion -	$12\% * 0.065 * 6,000 \text{ lb} = 46.8 \text{ lb OC/hr}$
aging -	$27\% * 0.065 * 6,000 \text{ lb} = 105.3 \text{ lb OC/hr}$
molding -	$12\% * 0.065 * 6,000 \text{ lb} = 46.8 \text{ lb OC/hr}$
post production-	$8\% * 0.065 * 6,000 \text{ lb} = 31.2 \text{ lb OC/hr}$

The per cent pentane lost at each step (8%-27%) from pentane impregnated EPS 326 resin at percent specification ranges in BASF Technical Bulletin N-840 Styropor expandable polystyrene, November, 1996

If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission tests performed in accordance with the following requirements:

- i. The emission testing shall be conducted within 6 months following permit issuance.

Insulf**PTI A**

Emissions Unit ID: P001

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- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for organic compounds.
- iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rate(s) for organic compounds: AQMD method 306 test. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA Central District Office.
- iv. The tests 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.
- v. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate 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).
- vi. Personnel from the appropriate 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.
- vii. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate 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.

The permittee may use formulation data to determine the OC content of each organic material employed in this emissions unit.

- b. Emission Limitation:
Organic compound emissions shall not exceed 172.3 ton per rolling twelve month period

Applicable Compliance Method:

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Emissions Unit ID: P001

Compliance shall be determined by record keeping specified in III.2.b. based on the sum of the rolling twelve-month EPS production times the respective median pentane content in percent by weight for each resin times the respective average percent of pentane emitted during resin expansion:

3.5% by weight content $17,900,000 \text{ lbs} * 0.035 * 0.47 * 1 \text{ ton}/2,000 \text{ lb} = 147.23 \text{ tons OC/yr}$

6.5% by weight content $8,500,000 \text{ lbs} * 0.065 * 0.59 * 1 \text{ ton}/2,000 \text{ lb} = 162.9 \text{ tons OC/yr}$

3.5% by weight content $6,025,500 \text{ lbs} * 0.035 * 0.47 * 1 \text{ ton}/2,000 \text{ lb} = 49.6 \text{ tons OC/yr}$

4.5% by weight content $3,724,500 \text{ lbs} * 0.045 * 0.64 * 1 \text{ ton}/2,000 \text{ lb} = 53.6 \text{ ton OC/yr}$

6.5% by weight content $3,250,000 \text{ lbs} * 0.065 * 0.59 * 1 \text{ ton}/2,000 \text{ lb} = 62.3 \text{ tons OC/yr}$

$49.6 \text{ tons} + 53.6 \text{ tons} + 62.3 \text{ tons} = 165.5 \text{ tons OC}$

VI. Miscellaneous Requirements

None

Insulf

PTI A

Emissions Unit ID: P001

Issued: To be entered upon final issuance

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.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - EPS foam block processing line with preexpansion, aging and molding (6,000 lb/hr)		Compliance with Air Toxic Policy

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install for this emissions unit P001 was evaluated based on the actual materials (typically coatings and cleanup 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 this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Pentane

TLV (mg/m3): 1,770

Insulfoam**PTI Application: 01 00275****Issued****Facility ID: 0125182441**

Emissions Unit ID: P001

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 unit after its 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 still 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.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

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PTI A

Issued: To be entered upon final issuance

Emissions Unit ID: P001

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 01-08375 Facility ID: 0125182441

FACILITY NAME Insulfoam

FACILITY DESCRIPTION EPS Block Processing Line. CITY/TWP Obetz

SIC CODE 3086 SCC CODE 3-08-008-01 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION EPS foam block processing line with preexpansion, aging and molding (6,000 lb/hr)

DATE INSTALLED 5/2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter					
PM ₁₀					
Sulfur Dioxide					
Organic Compounds	Attainment			230.1	172.3
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics	Pentane			230.1	172.3

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?**Enter Determination** Use of nonphotochemically reactive compounds, annual usage restrictions, compliance with the Ohio toxics policy.IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT?

\$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to containinants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? x YES NOIDENTIFY THE AIR CONTAMINANTS: Pentane

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	Electronic	Additional information File Name Convention (your PTI # plus this letter)	Hard Copy	None
Calculations (required)	<input checked="" type="checkbox"/>	0000000c.wpd	<input type="checkbox"/>	
Modeling form/results	<input type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PTI Application (complete or partial)*	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BAT Study	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other/misc.	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

NEW SOURCE REVIEW FORM B

PTI Number: 01-08375

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CITY/TWP Obetz

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Expandable Polystyrene resin line

A. General Information:

Premier Industries operates the Insulfoam facility at 4849 Groveport Rd. in Obetz, Franklin County. EPS resin beads impregnated with pentane, which acts as a blowing agent, are delivered in 1,000 pound gaylord boxes. EPS resin beads are processed in batches of up to 6,000 pounds at varying pentane content in four sequential stages emitting percentages of pentane during each sequence. Resin beads, are expanded with steam in the pre expansion chamber to form prepuff, which is then aged in suspended bags and expanded in a vertical mold machine to form blocks. Pentane and steam emissions are vented through stacks from the pre expansion chamber and block mold machine, while pentane is vented as an off-gas through roof vents during aging and in post production.

B. Applicable Rules

OAC rule 3745-31-05(A)(3) -

The expanded polystyrene processing line employs steam to expand polystyrene beads resulting in a percentage of pentane released during pre-expansion and sequentially as an off-gas during aging vented with steam in block molding followed by off-gassing during post production handling. Although the proposed allowable emission rate of 230.1 pounds OC per hour would not be released simultaneously, it is based on summing emissions during expansion, aging, block molding and post-production of a high pentane content resin at 6,000 pounds polystyrene resin beads at a median pentane content of 6.5% by weight.

Premier proposes to restrict resin bead usages to maintain annual emissions below 172.3 ton organic compound through rolling twelve month restrictions on weight restrictions for resin beads at varying pentane content with median pentane contents ranging from 3.5% to 6.5% content by weight. At the restricted annual emission rate, the installation of add-on controls would not be cost effective based on costs associated with capture hooding, duct work and control equipment and the fuel cost to operate the equipment.

Pentane has a listed TLV and Premier submitted Screen3 modeling of pentane released from three points that verified compliance with the toxic policy. Because the hourly pentane emissions are not released simultaneously, the pentane emissions were modeled at 198.6 lbs per hour, as the 31.2 lbs is post production pentane released over the subsequent 4 weeks following production.

OAC rule 3745-17-07(A)(1) -

The EPS process line vents organic compounds and steam through two stacks with fugitive organic compounds vented through roof vents. Stack opacity would not be applicable because particulate emissions are not generated in this process.

NEW SOURCE REVIEW FORM B

PTI Number: 01-08375

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FACILITY DESCRIPTION EPS Block Processing Line.

CITY/TWP Obetz

OAC rule 3745-21-07(G)(2) -

Pentane used as a blowing agent impregnated in the resin beads is non-photochemically reactive. OAC rule 3745-21-07 (G)(9) exempts organic compound emissions from the hourly and daily emission rates under OAC rule 3745-21-07(G)(2).

Fee

Insulfoam operates under SIC code of 3086 with at a maximum process weight rate of 3 ton/hr, resulting in a fee of \$600.

Calculations

Technical Bulletin N-840 (November 1996) presents pentane emissions during processing of BF 326 for block molding in percent by weight. Pentane is not emitted simultaneously during each sequential process, as aging may release fugitive emissions from 6 to 24 hours and post production fugitive may be released up to 4 weeks after block molding. Insulfoam calculated maximum potential hourly emissions by assuming all emissions are released from 4 sequential processes during the same hour at the maximum pentane content of 6.5% and 6,000 pound process design weight by summing the emission rates based on percent released at each step:

pre-expansion - $0.12 * 0.065 * 6,000 \text{ lb} = 46.8 \text{ lb OC/hr}$

aging - $0.27 * 0.065 * 6,000 \text{ lb} = 105.3 \text{ lb OC/hr}$

molding - $0.12 * 0.065 * 6,000 \text{ lb} = 46.8 \text{ lb OC/hr}$

post production and cutting- $0.08 * 0.065 * 6,000 \text{ lb} = 31.2 \text{ lb OC/hr}$

The annual emissions are based on annual usage restrictions for each type of resin bead employed at the corresponding median pentane content in percent by weight times the maximum percent of pentane released during expansion, aging, molding and post-production:

3.5% pentane content - $17,900,000 \text{ lbs} * 0.035 * 0.47 * 1 \text{ ton}/2,000 \text{ lb} = 147.23 \text{ tons OC/yr}$

6.5% pentane content - $8,500,000 \text{ lbs} * 0.065 * 0.59 * 1 \text{ ton}/2,000 \text{ lb} = 163 \text{ tons OC/yr}$

3.5% pentane content - $6,025,500 \text{ lbs} * 0.035 * 0.47 * 1 \text{ ton}/2,000 \text{ lb} = 49.6 \text{ tons OC/yr}$

4.5% pentane content - $3,724,500 \text{ lbs} * 0.045 * 0.64 * 1 \text{ ton}/2,000 \text{ lb} = 53.6 \text{ ton OC/yr}$

6.5% pentane content - $3,250,000 \text{ lbs} * 0.065 * 0.59 * 1 \text{ ton}/2,000 \text{ lb} = 62.3 \text{ tons OC/yr}$

mixed pentane content resins @ 13,000,000 lbs $49.6 \text{ tons} + 53.6 \text{ tons} + 62.3 \text{ tons} = 165.5 \text{ tons OC}$

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

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

Permit To Install 01-08375 Insulfoam

A. Source Description:

The EPS production line includes a steam activated pre-expansion chamber and dryer, 20-3,500 lb aging bags, and a 24 foot steam activated block mold machine to form large blocks of foam. Foam blocks may be stored or subsequently processed using hot wire cutters or a heated laminator for applying aluminum sheet.

B. Facility Emissions and Attainment Status:

NEW SOURCE REVIEW FORM B

PTI Number: 01-08375

Facility ID: 0125182441

FACILITY NAME Insulfoam

FACILITY DESCRIPTION EPS Block Processing Line.

CITY/TWP Obetz

Pentane is the sole organic compound emitted from the EPS production line. At the maximum annual potential production rate of 48,180,000 tons of resin beads and a median pentane content 6.5% by weight, the maximum potential to emit (PTE) would be 923.85 ton OC/yr. Franklin County is an attainment area for all criteria pollutants.

C. Source Emissions

The maximum hourly emission rate was calculated based on sole usage of 6.5% pentane content resin bead processed at 6,000 lb/hr. The proposed 230.1 lb OC/hr emission rate is a summation of 46.8 lb stack emission from the pre-expansion chamber, 105.3 lb fugitive emission from aging bags, 46.6 lb stack emission from the block molding operation, and 31.2 lb fugitive emission from cutting and storage. Premier Industries proposes to restrict production to maintain annual OC emissions below both the both the PSD review threshold and BAT cost effectiveness by employing a mixture of median content resin beads for low (3.5% pentane/wt), mid (4.5% pentane/wt), and high (6.5% pentane) content resin beads. The application proposes to restrict annual production to result in maximum annual emission of 172.3 ton OC/yr under three resin usage scenarios ranging from 8,500,000 pounds of 6.5% median pentane content resin beads to 17,900,000 pounds resin beads with a content of 4.5% pentane content by weight.

D. Conclusion

Insulfoam will maintain the annual emission below 172.3 ton organic compound per year through restricted resin beads usages. EPS foam production from pentane impregnated beads is not listed as one of the 28 category PSD rule list and so will not be required to install BAT control to reduce OC emissions below 100 tons per year.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

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

NEW SOURCE REVIEW FORM B

PTI Number: 01-08375

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OC**Tons Per Year****172.3**

NEW SOURCE REVIEW FORM B

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