State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL **CERTIFIED MAIL**
TUSCARAWAS COUNTY

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

Application No: 06-08313
Fac ID: 0679000327

DATE: 8/23/2007

Plymouth Foam Inc.
Roy Bach
One Southern Gateway
Gnadenhutten, OH 44629

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, 43216-1049.

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

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

Sincerely,

Michael W. Ahern

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

CC: **USEPA** **SEDO** **WV** **PA**
TUSCARAWAS COUNTY

PUBLIC NOTICE
ISSUANCE OF DRAFT PERMIT TO INSTALL **06-08313** FOR AN AIR CONTAMINANT SOURCE
FOR **Plymouth Foam Inc.**

On 8/23/2007 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Plymouth Foam Inc.**, located at **One Southern Gateway, Gnadenhutten**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 06-08313:

Foam expansion aging molding cutting laminating and storage operations.

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

Bruce Weinberg, Ohio EPA, Southeast District Office, 2195 Front Street, Logan, OH 43138
[(740)385-8501]

DRAFT PERMIT TO INSTALL 06-08313

Application Number:	06-08313
Facility ID:	0679000327
Permit Fee:	**To be entered upon final issuance**
Name of Facility:	Plymouth Foam Inc.
Person to Contact:	Roy Bach
Address:	One Southern Gateway Gnadenhutten, OH 44629

Location of proposed air contaminant source(s) [emissions unit(s)]:
One Southern Gateway
Gnadenhutten, Ohio

Description of proposed emissions unit(s):
Foam expansion aging molding cutting laminating and storage operations.

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

_____

Chris Korleski
Director

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 obtained before 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.

Plymouth Foam Inc. **Facility ID: 0679000327**
PTI Application: 06-08313
Issued: To be entered upon final issuance

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
[redacted]	

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

I. Operational Restrictions

1. Emissions of organic compounds (OC) from P001 - P008, combined, shall not exceed 249.0 tons per year.

2. The raw beads contain a trace (less than 0.1%) of residual styrene monomer, which is assumed to be emitted. Styrene is a HAP and the uncontrolled emissions can be calculated as:

   (3000 lb/hr maximum rate)(8760 hr/yr)(0.1% styrene)(0.0005 ton/lb) = 13.14 tpy.

   This permit requires that 86.5% of OC emissions from P001-P006 to be captured and vented to a regenerative thermal oxidizer (RTO) with a destruction efficiency of 98%. The emissions associated with P001-P006 account for 57.4 weight percent. The remaining 42.6 weight percent are uncontrolled fugitive emissions. Controlled potential emissions, therefore, are:

   (13.14 tpy)(0.574) x [(1-0.865) + (0.865)(1-0.98)] + (13.14tpy)(0.426) = 6.75 tpy

   Since styrene emissions are below the major source level and cannot be separated from the pentane emissions, no individual styrene emissions limit or record keeping requirement is needed.

3. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). OC emissions from P007 and P008 are not required to be controlled. Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.1 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

4. Total free pentane content of all EPS beads employed in any rolling, 12-month period shall not exceed 249.0 tons. The free pentane content (equivalent to the organic compounds emission rate) shall be determined in accordance with the record keeping requirement in section II.A.II.1.

II. Monitoring and /or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following:

   a. identification of each lot of beads processed;

   b. pounds of EPS beads in each lot processed by the pre-expander;

   c. the OC (free pentane) content of EPS beads in each lot processed by the pre-expander, in percent;

   d. final disposition of each lot of EPS beads processed, by category of product or shape which has been tested for residual pentane;

   e. total potential OC emissions (free pentane), in tons; and

   f. total OC emissions (free pentane) from EPS processed in P001 - P008, combined, in tons, for the 12-month period, for all categories of products and shapes processed, calculated in accordance with the equation in section II.A.IV.1;

   g. total OC emissions from all coatings and cleanup materials used in the laminating line (P008); and

   h. total facility OC emissions for the 12-month period, including emissions from boilers and heaters as well as emissions from P008.

2. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent emissions test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

3. The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees

Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals. The permittee shall collect and calculate the average combustion temperature within the thermal oxidizer, each of the eight, 3-hour blocks of time during each day of operation, and shall record and maintain the following information each day:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees

Fahrenheit below the average temperature measured during the most recent emissions test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log of the downtime for the capture (collection) system, thermal oxidizer, and monitoring equipment when the associated emissions unit(s) was/were in operation.

4. Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range/limit specified in this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;
b. the magnitude of the deviation at that time;
c. the date the investigation was conducted;
d. the name(s) of the personnel who conducted the investigation; and
e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;
g. the date corrective action was completed;
h. the date and time the deviation ended;
i. the total period of time (in minutes) during which there was a deviation;
j. the temperature readings immediately after the corrective action was implemented; and
k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the

appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future emission tests that demonstrate compliance with the allowable OC emission

rate for the controlled emissions unit(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

III. Reporting Requirements

1. The permittee shall submit a summary of the total OC emissions for the year, including calculations, to the Ohio EPA, Southeast District Office within thirty (30) days following the end of each calendar year: A spreadsheet with the information recorded pursuant to Section II.A.II.1.a - h would meet this requirement.

2. The permittee shall submit quarterly summaries that identify all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated the emissions unit(s) was/were in compliance and/or any records of downtime for the capture (collection) system, the thermal oxidizer, or the monitoring equipment when the emissions unit(s) was/were in operation. These quarterly reports shall be submitted by April 30, July 31, October 31, and January 31, and shall cover the records for the previous calendar quarters.

3. The permittee shall submit quarterly reports that identify the following information concerning the operation of the thermal oxidizer during the operation of the emissions unit(s):

   a. each period of time when the average combustion temperature within the thermal oxidizer was outside of the acceptable range;

   b. an identification of each incident of deviation described in "a" (above) where a prompt investigation was not conducted;

   c. an identification of each incident of deviation described in "a" where prompt corrective action, that would bring the temperature into compliance with the acceptable range, was determined to be necessary and was not taken; and

   d. an identification of each incident of deviation described in "a" where proper records were not maintained for the investigation and/or the

corrective action(s).

These quarterly reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

IV. Testing Requirements

1. Compliance with the emission limitation established in sections II.A.I.1 of this permit shall be determined in accordance with the following method:

   Emission Limitation:

   Emissions of OC from EPS processed in P001 - P008, combined, shall not exceed 249.0 tons per year.

   Applicable Compliance Method:

   Compliance shall be determined for P001 - P008, combined, by using the following equation for all combinations of product, shape and age for which a separate emission factor was developed (residual pentane tested), using the overall capture and control efficiencies determined during the latest performance test.

   $$OC\ (lb/yr) = (\sum [Wi\ (lb/yr) \times (X_{i,\ initial}\ (lb/lb) - X_{i,\ mold}\ (lb/lb)] \times [(1 - cap.eff.) + cap.eff. \times (1 - DE)] + \sum [Wi\ (lb/yr) \times (X_{i,\ mold}\ (lb/lb) - X_{i,\ store}\ (lb/lb)]) \div 2{,}000\ lb/ton$$

   where: Wi is the weight of bead in pounds per 12-month period
   $X_{i,\ initial}$ is the raw material OC content, as documented by the manufacturer, as a weight fraction
   $X_{i,\ mold}$ is the material OC content after molding, as determined by pentane retention testing, as a weight fraction
   $X_{i,\ store}$ is the material OC content at the time of shipping, as determined by pentane retention testing, as a weight fraction
   cap.eff. is the fraction capture efficiency
   DE is the oxidizer destruction efficiency.

   Total OC emissions from all other sources at the facility [(1) 9.25 mmBtu/hour natural gas fired space heater, (1) 8.36 mmBtu/hour natural gas fired process boiler, (2) 4.2 mmBtu/hour natural gas fired process boilers, (1) 3 mmBtu/hour natural gas fired space heater, and (4) 0.25 mmBtu/hour natural gas fired space heaters; TOTAL: 30.01 million Btu/hr] combined are less than 1.0 ton, insuring that this facility is not subject to the PSD rules, by using the following equation based on the emission factor in AP-42 Section 1.4 (7/98).

   $$(0.005392\ lb/million\ Btu)(30.01\ million\ Btu/hr)(8760\ hr/yr)(0.0005\ ton/lb) = 0.71\ tpy$$

2. The permittee shall conduct, or have conducted, emission testing for emissions units P001 - P006 in accordance with the following requirements:

   The emission testing shall be conducted within 6 months after start-up.

   The emission testing shall be conducted to determine overall capture efficiency for P001 - P006, combined, and destruction efficiency for the regenerative thermal oxidizer (RTO).

   The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

   The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. 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.

   The capture efficiency shall be determined as the difference between the calculated total OC released (raw bead OC content minus residual in all products, as determined per section II.A.IV.3) and the OC measured at the inlet of the RTO.

   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 Southeast District Office.

   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 Southeast 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 Southeast District Office's refusal to accept the results of the emission test(s).

   Personnel from the Ohio EPA Southeast 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 emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Southeast 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 Southeast District Office.

3. The permittee shall conduct, or have conducted, testing for residual pentane for all products (actually combinations of product, shape and age) in accordance with the following requirements:

The emission testing shall be conducted once each calendar year, but at least 6 months apart.

The emission testing shall be conducted using accepted industry test methods.

Individual emission factors shall be developed for each of the different products.

Sampling shall be representative of worst case conditions in terms of sample location, raw material pentane content, and density for each product sampled. The representative storage time shall be based on the average storage time for each product sampled.

A minimum of three samples shall be collected from each selected block and shape mold. At least three separate blocks and shape molds shall be sampled to determine an emission factor.

An average residual pentane emission factor shall be developed from the sample results by common statistical methods. The average sample residual pentane content from the sampling of each category shall be noted for the calculation in section II.A.IV.1.

The proposed testing procedure, sampling protocol and sampling date shall be communicated to Ohio EPA, Southeast District Office at least two weeks prior to the sampling date.

Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s) and acquire data and information necessary to ensure that the operation of the emissions unit and the sampling procedures provide a valid

characterization of the emissions from the emissions unit.

The results of the testing shall be submitted to the Ohio EPA, Southeast District Office within 45 days after the testing is completed.

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

I. State air dispersion modeling requirements

1. The permit to install for emissions units P001 - P008 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit application. The Ohio EPA's "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN 3.0, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

   a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

      i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

      ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

   b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

   c. This standard is/was then adjusted to account for the duration of the

exposure or the operating hours of the emissions unit(s), i.e., "**X**" hours per day and "**Y**" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV OVER 10 ~ TIMES ~ { 8 OVER X } ~ TIMES ~ { 5 OVER Y } ~ = ~
4 ~ { TLV OVER XY } ~ = ~ MAGLC

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminant(s):

Pollutant: styrene
TLV (mg/m3): 85.2
Maximum Hourly Emission Rate (lbs/hr): RTO stack: 0.033; fugitive: 2.252
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 370
MAGLC (ug/m3): 2029

The permittee, has demonstrated that emissions of styrene, from emissions units P001 - P008, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic contaminant in accordance with ORC 3704.03(F).

2. Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration", the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

   a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC 3745-114-01, that was modeled from the initial (or last) application; and

   c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

   If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the ORC 3704.03(F), the statute, has been documented. If the change(s) meet(s) the definition of a "modification" or if a new toxic is emitted, or the modeled toxic(s) is/are expected to exceed the previous permitted level(s), then the permittee

shall apply for and obtain a final permit-to-install prior to the change. The director may consider any significant departure from the operations of the emissions unit, described in the permit-to-install application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and may require the permittee to submit a permit-to-install application for the increased emissions.

3. The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute":

   a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

   b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with ORC 3704.03(F);

   c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

   d. the documentation of the initial evaluation of compliance with ORC 3704.03(F) and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

4. The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

5. The permittee shall submit annual reports to the Ohio EPA Southeast District Office documenting and changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with ORC 3704.03(F) through the predicted 1-hour maximum ground-level concentration. This report is due within 30 days of the end of any calendar year in which revised dispersion modeling needed to be performed.

Emissions Unit ID: P001

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 - P001 - Hirsch 9000 pre-expander for EPS bead vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 6.3 pounds per hour; 27.6 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 6.3 pounds of OC per hour and 27.6 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.I.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

Emissions Unit ID: P001

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

   Emissions of OC shall not exceed 6.3 pounds per hour; 27.6 tons per year.

   Applicable Compliance Method:

   Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (20%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

   Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

   (3,000 lbs EPS/hr)(0.068)(0.20)[(1 - 0.865) + (0.865)(1 - 0.98)] = 6.21 lbs/hr.

   where:

   3,000 lbs EPS/hr = the maximum hourly production rate of EPS;
   0.068 = the maximum pentane content of raw material, as a weight fraction; and
   0.20 = the fraction of emissions attributed to the pre-expander.

   Compliance with the annual emission limit shall be determined by multiplying the maximum hourly emission rate by 8760 hr/yr and 0.0005 ton/lb:

   (6.3 lb/hr)(8760 hr/yr)(0.0005 ton/lb) = 27.6 tons per year

   b. Emission Limitation:

   OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

   Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

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 - P001 - Hirsch 9000 pre-expander for EPS bead vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

Emissions Unit ID: P002

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 -P002 - Aging bags for EPS (84000 cubic feet capacity) vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 7.2 pounds per hour; 31.5 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 7.2 pounds of OC per hour and 31.5 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

Issued: To be entered upon final issuance

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Emissions of OC shall not exceed 7.2 pounds per hour; 31.5 tons per year.

      Applicable Compliance Method:

      Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (23%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

      Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

      (3,000 lbs EPS/hr)(0.068)(0.23)[(1 - 0.865) + (0.865)(1 - 0.98)] = 7.15 lbs/hr.

      where:

      3,000 lbs EPS/hr = the maximum hourly production rate of EPS;
      0.068 = the maximum pentane content of raw material, as a weight fraction; and
      0.23 = the fraction of emissions attributed to the pre-puff storage (aging bags).

      Compliance with the annual emission limit shall be determined by multiplying the maximum hourly emission rate by 8760 hr/yr and 0.0005 ton/lb:

      (7.2 lb/hr)(8760 hr/yr)(0.0005 ton/lb) = 31.5 tons per year.

   b. Emission Limitation:

      OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as

determined by testing per section II.A.IV.1 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

VI. Miscellaneous Requirements

None

Emissions Unit ID: P002

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 -P002 - Aging bags for EPS (84000 cubic feet capacity) vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

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 -P003 - Bendorf block molding machine vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 3.9 pounds per hour; 10.9 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 3.9 pounds of OC per hour and 10.9 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

Issued: To be entered upon final issuance

None

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Emissions of OC shall not exceed 3.9 pounds per hour; 10.9 tons per year.

      Applicable Compliance Method:

      Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (8%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

      Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

      (4,630 lbs EPS/hr)(0.068)(0.08)[(1 - 0.865) + (0.865)(1 - 0.98)] = 3.84 lbs/hr.

      where:

      4,630 lbs EPS/hr = the maximum hourly production rate of EPS in molding;
      0.068 = the maximum pentane content of raw material, as a weight fraction; and
      0.08 = the fraction of emissions attributed to the Bendorf block mold.

      Compliance with the annual emission limit shall be determined by multiplying the maximum annual emission rate, based on maximum expander capacity, by 8760 hr/yr and 0.0005 ton/lb:

      (3000 lb EPS/hr)(0.068)(0.08)[(1 - 0.865) + (0.865)(1 - 0.98)](8760 hr/yr)(0.0005 ton/lb) = 10.9 tons per year

   b. Emission Limitation:

Emissions Unit ID: P003

OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

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 - P003 - Bendorf block molding machine vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

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.

Operations, Property, and/or Equipment -P004 - Dingeldein block molding machine vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 1.5 pounds per hour; 4.2 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 1.5 pounds of OC per hour and 4.2 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

Issued: To be entered upon final issuance

None

Issued: To be entered upon final issuance

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Emissions of OC shall not exceed 1.5 pounds per hour; 4.2 tons per year.

      Applicable Compliance Method:

      Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (3%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

      Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

      (4,630 lbs EPS/hr)(0.068)(0.03)[(1 - 0.865) + (0.865)(1 - 0.98)] = 1.44 lbs/hr.

      where:

      4,630 lbs EPS/hr = the maximum hourly production rate of EPS in molding;
      0.068 = the maximum pentane content of raw material, as a weight fraction; and
      0.03 = the fraction of emissions attributed to the Dingeldein block mold.

      Compliance with the annual emission limit shall be determined by multiplying the maximum annual emission rate, based on maximum expander capacity, by 8760 hr/yr and 0.0005 ton/lb:

      (3000 lb EPS/hr)(0.068)(0.03)[(1 - 0.865) + (0.865)(1 - 0.98)](8760 hr/yr)(0.0005 ton/lb) = 4.2 tons per year

   b. Emission Limitation:

Emissions Unit ID: P004

OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

Issued: To be entered upon final issuance

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

VI. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment -P004 - Dingeldein block molding machine vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

Emissions Unit ID: P005

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.

Operations, Property, and/or Equipment -P005 - Kurtz shape molding machine (number 1) vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 1.0 pounds per hour; 2.8 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 1.0 pounds of OC per hour and 2.8 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

Issued: To be entered upon final issuance

None

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Emissions of OC shall not exceed 1.0 pounds per hour; 2.8 tons per year.

      Applicable Compliance Method:

      Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (2%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

      Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

      (4,630 lbs EPS/hr)(0.068)(0.02)[(1 - 0.865) + (0.865)(1 - 0.98)] = 1.0 lbs/hr.

      where:

      4,630 lbs EPS/hr = the maximum hourly production rate of EPS in molding;
      0.068 = the maximum pentane content of raw material, as a weight fraction; and
      0.02 = the fraction of emissions attributed to the shape mold.

      Compliance with the annual emission limit shall be determined by multiplying the maximum annual emission rate, based on maximum expander capacity, by 8760 hr/yr and 0.0005 ton/lb:

      (3000 lb EPS/hr)(0.068)(0.02)[(1 - 0.865) + (0.865)(1 - 0.98)](8760 hr/yr)(0.0005 ton/lb) = 2.8 tons per year

   b. Emission Limitation:

Emissions Unit ID: P005

OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

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 -P005 - Kurtz shape molding machine (number 1) vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

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.

Operations, Property, and/or Equipment - *P006 - Kurtz shape molding machine (number 2) vented to an oxidizer*

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 1.0 pounds per hour; 2.8 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 1.0 pounds of OC per hour and 2.8 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

Emissions Unit ID: P006

None

Issued: To be entered upon final issuance

V. Testing Requirements

1. Compliance with the emission limitations established in sections III.A.I.1 and III.A.II.1 of this permit shall be determined in accordance with the following methods:

   a. Emission Limitation:

      Emissions of OC shall not exceed 1.0 pounds per hour; 2.8 tons per year.

      Applicable Compliance Method:

      Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (2%) times the overall control efficiency as determined by the latest performance test. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

      Until testing is performed, capture efficiency will be estimated at 86.5%, based on tests of a similar installation, and control efficiency will be estimated at 98%, based on the design specification. The initial calculation is shown below.

      (4,630 lbs EPS/hr)(0.068)(0.02)[(1 - 0.865) + (0.865)(1 - 0.98)] = 1.0 lbs/hr.

      where:

      4,630 lbs EPS/hr = the maximum hourly production rate of EPS in molding;
      0.068 = the maximum pentane content of raw material, as a weight fraction; and
      0.02 = the fraction of emissions attributed to the shape mold.

      Compliance with the annual emission limit shall be determined by multiplying the maximum annual emission rate, based on maximum expander capacity, by 8760 hr/yr and 0.0005 ton/lb:

      (3000 lb EPS/hr)(0.068)(0.02)[(1 - 0.865) + (0.865)(1 - 0.98)](8760 hr/yr)(0.0005 ton/lb) = 2.8 tons per year

   b. Emission Limitation:

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OC emissions from P001 - P006 shall be captured and vented to a regenerative thermal oxidizer (RTO). Capture efficiency shall be at least 86.5%, as determined by testing per section II.A.IV.2 for P001 - P006, combined. Destruction efficiency of the RTO shall be at least 98%, by weight.

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Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by testing in accordance with section II.A.IV.2.

VI. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment - P006 - Kurtz shape molding machine (number 2) vented to an oxidizer

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

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.

Operations, Property, and/or Equipment - P007 - Cutting of EPS block and storage of products

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) shall not exceed 59.9 pounds per hour; 169.8 tons per year. See section III.A.II.1.

2. Additional Terms and Conditions

2.a The 59.9 pounds of OC per hour and 169.8 tons OC per year limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

II. Operational Restrictions

1. OC emissions from P007 and P008 are not required to be controlled.

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

Emissions Unit ID: P007

1. Compliance with the emission limitations established in section III.A.I.1 of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Emissions of organic compounds (OC) shall not exceed 59.9 pounds per hour; 169.8 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly raw material usage times the maximum OC content of raw material used, as certified by the manufacturer times the percent of the total emissions allotted to this emissions unit (19%). As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

(4,630 lbs EPS/hr)(0.068)(0.19) = 59.82 lbs/hr.

where:

4,630 lbs EPS/hr = the maximum hourly production rate of EPS;
0.068 = the maximum pentane content of raw material, as a weight fraction; and
0.19 = the fraction of emissions attributed to cutting and storage.

Compliance with the annual emission limit shall be determined by multiplying the maximum annual emission rate, based on maximum expander capacity, by 8760 hr/yr and 0.0005 ton/lb:

(3000 lb EPS/hr)(0.068)(0.19)(8760 hr/yr)(0.0005 ton/lb) = 169.77 tons per year

VI. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment -P007 - Cutting of EPS block and storage of products

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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

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.

Operations, Property, and/or Equipment - P008 - Laminating line

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	Emissions of organic compounds (OC) from adhesive and cleanup solvent usage shall not exceed 48.0 pounds per day; 8.8 tons per year. See section III.A.II.1.
OAC rule 3745-21-07(G)(2)	See section III.A.I.2.a.

2. Additional Terms and Conditions

2.a OAC rule 3745-21-07(G)(2) has no applicable requirements in this permit because the adhesives contain very little OC. Emissions are primarily from cleanup. Use of photochemically reactive cleanup materials, not proposed in the permit application, would invoke the applicability of this rule to the coating emissions only and the potential to emit associated with the coatings is less than 0.15 pounds per hour.

II. Operational Restrictions

1. OC emissions from P007 and P008 are not required to be controlled.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain records of the following information for all coatings and cleanup materials employed in emissions unit P008:

   a. the name and identification of each coating and cleanup material;

b. the number of gallons of coatings;

c. the number of gallons of cleanup materials;

d. the OC content, as applied, in pounds per gallon;

e. the total OC emissions from all coatings and cleanup materials employed [the sum of (b. times d.) for all coatings plus (c. times d.) for all cleanup materials] divided by 2000, in tons.

IV. Reporting Requirements

1. The permittee shall submit a summary of the total OC emissions for the year, including calculations, to the Ohio EPA, Southeast District Office within thirty (30) days following the end of each calendar year: A spreadsheet with the information recorded pursuant to Section III.A.III.1.a-e would meet this requirement.

V. Testing Requirements

1. Compliance with the emission limitations established in section III.A.I.1 of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

Emissions of OC shall not exceed 48.0 pounds per day; 8.8 tons per year.

Applicable Compliance Method:

Compliance with the hourly emission limit shall be determined by multiplying the maximum hourly coating and cleanup material usage times the maximum OC content of coating and cleanup materials used. As long as this calculation of potential emissions demonstrates that the hourly emission limit can not be exceeded, no additional record keeping and reporting requirements are necessary to demonstrate compliance with this limitation.

The initial calculation is shown below.

(24 hr/day)(40.7 lbs adhesive/hr)(0.00323 lb OC/lb of adhesive) + (44.0 lb cleanup solvent/day) = 47.2 lbs/day.

Compliance with the annual emission limit shall be determined by multiplying the maximum daily emission rate by 365 day/yr and 0.0005 ton/lb:

(48.0 lb/day)(365 day/yr)(0.0005 ton/lb) = 8.76 tons per year.

Issued: To be entered upon final issuance

VI. Miscellaneous Requirements

None

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.

Operations, Property, and/or Equipment -P008 - Laminating line

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	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