OhioEPA

State of Ohio Environmental Protection Agency

Street Address:
Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 **FAX:** (614) 644-2329

Mailing Address:
Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

10/02/06

CERTIFIED MAIL

RE: Proposed Title V Significant Permit Modification Chapter 3745-77 permit 01-25-18-2441 Insulfoam

Attn: Stacey Coburn AR-18J
United States Environmental Protection Agency
Region V
77 West Jackson Blvd.
Chicago, IL 60604-3590

Dear Ms. Coburn:

The proposed issuance of the Title V permit for Insulfoam, has been created in Ohio EPA's State Air Resources System (STARS) on 10/02/06, for review by USEPA. This proposed action is identified in STARS as 3-Title V Proposed Permit T+C covering the facility specific terms and conditions, and Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's electronic notification of this proposed action. Please contact me at (614) 644-3631 before the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,

Michael W. Ahern

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

cc: Central District Office
File, DAPC PIER

State of Ohio Environmental Protection Agency

PROPOSED TITLE V SIGNIFICANT PERMIT MODIFICATION

Original Effective Date:	Expiration Date:	Modification Effective Date: ***To be entered upon final issuance***

This document constitutes issuance of a Title V permit for Facility ID: 01-25-18-2441 to:

Insulfoam
4849 Groveport Road
Obetz, OH 43207

Emissions Unit ID (Company ID)/Emissions Unit Activity Description

P002 (Preexpander #1) Hirsch 12000 Pre-expander	Bead aging bag farm, (20) 4,000 cubic foot bags, enclosed and vented to emissions control device (boilers)	P006 (Mold #2) Idro 16' block mold
P003 (Preexpander #2) Idro PJX 4000 Pre-expander	P005 (Mold #1) Idro 24' block mold	P007 (Product storage and processing) Cutting and storage of molded products
P004 (Bead Aging Bag Farm)		

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Central District Office
122 South Front Street
Columbus, OH 43215
(614) 728-3778

OHIO ENVIRONMENTAL PROTECTION AGENCY

Joseph P. Koncelik
Director

PART I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Section

1. Monitoring and Related Record Keeping and Reporting Requirements

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.III of Part III of this Title V permit, 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 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.
(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c. The permittee shall submit required reports in the following manner:

i. **All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:**

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year in accordance with General Term and Condition A.1.c.ii below; and each report shall cover the previous calendar quarter (An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c)).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) constitutes a violation of an emission limitation (or control requirement) and, therefore, is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided

in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any scheduled maintenance, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

ii. **Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Section A.IV of Part III of this Title V permit or, in some cases, in Part II of this Title V permit, all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written 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.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this General Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this General Term and Condition.

See B.6 below if no deviations occurred during the quarter.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

iii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted in the following manner:**

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; General Terms and Conditions: A.2, A.3, A.4, A.6.e, A.7, A.12, A.14, A.18, A.19, A.20, and A.22 of Part I of this Title V permit, as well as any deviations from the requirements in Section A.V or A.VI of Part III of this Title V permit**,** and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with General Term and Condition A.1.c.ii above shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office

or local air agency by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in Part II.A of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with General Term and Condition A.1.c.ii above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.
(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."
(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

v. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

2. Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in General Term and Condition A.1.c.i above.
(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a. a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b. as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

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.
(Authority for term: OAC rule 3745-77-07(A)(5))

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.
(Authority for term: OAC rule 3745-77-07(A)(6))

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, in accordance with A.10 below. 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.

f. Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable upon final issuance of all applicable OAC Chapter 3745-35 operating permits and/or registrations for all subject emissions units located at the facility and:

i. the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

ii. the permittee no longer meets the definition of a “major source” as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

iii. a combination of i. and ii. above.

The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.
(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

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.
(Authority for term: OAC rule 3745-77-07(A)(8))

8. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.
(Authority for term: OAC rule 3745-77-07(A)(9))

9. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these general terms and conditions shall apply to all operating scenarios authorized in this permit.
(Authority for term: OAC rule 3745-77-07(A)(10))

10. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a. Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b. This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c. The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d. The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

11. 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.
(Authority for term: OAC rule 3745-77-07(B))

12. Compliance Requirements

a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V 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 paragraph (E) of OAC rule 3745-77-03.

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.

d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:

i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.

ii. Compliance certifications shall include the following:
(a) An identification of each term or condition of this permit that is the basis of the certification.

(b) The permittee's current compliance status.

(c) Whether compliance was continuous or intermittent.

(d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.

(e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

13. Permit Shield

a. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b. This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

14. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed

under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the appropriate Ohio EPA District Office or local air agency with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the appropriate District Office of the Ohio EPA or local air agency as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).
(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

15. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.
(Authority for term: OAC rule 3745-77-07(G))

16. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a. The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b. The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d. The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit to install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.
(Authority for term: OAC rule 3745-77-07(I))

17. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.
(This term is provided for informational purposes only.)

18. Insignificant Activities or Emissions Levels

Each IEU that has one or more applicable requirements shall comply with those applicable requirements.
(Authority for term: OAC rule 3745-77-07(A)(1))

19. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-07(A)(1))

20. 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.
(Authority for term: OAC rule 3745-77-07(A)(1))

21. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the responsible official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the responsible official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.
(Authority for term: OAC rule 3745-77-01)

22. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11))

B. ***State Only Enforceable Section***

1. Reporting Requirements Related to Monitoring and Record Keeping Requirements

The permittee shall submit required reports in the following manner:

a. Reports of any required monitoring and/or record keeping 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) 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. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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.)

2. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

3. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

4. Scheduled Maintenance/Malfunction Reporting

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

5. 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.

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a. where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in General Term and Condition A.1.c.ii; or

b. where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potentials to emit; or

c. where the company's responsible official has certified that an emissions unit has been permanently shut down.

Part II - Specific Facility Terms and Conditions

A. State and Federally Enforceable Section

1. The combined facility-wide stack and fugitive organic compound (OC) emissions from emissions units P002, P003, P004, P005, P006 and P007 shall not exceed 172.3 tons OC as a rolling, 12- month summation.
(Authority for term: PTI 01-12022)

2. Carbon monoxide (CO) emissions from the regenerative thermal oxidizer (RTO) stack shall not exceed 8.8 pounds per hour and 38.5 tons per year.
(Authority for term: PTI 01-12022)

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

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

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

c. the average combustion temperature within the RTO, for any 3-hour block of time when any of the emissions units are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test that demonstrated all emissions units to be in compliance.
(Authority for term: PTI 01-12022)

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

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

b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment when the associated emissions units were in operation.
(Authority for term: PTI 01-12022)

5. The permittee shall maintain monthly records of OC emissions, calculated on a monthly basis for emissions units P002, P003, P004, P005, P006 and P007, combined*:

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

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

* based upon the recordkeeping in Section A.III of the terms and conditions for emissions units P002, P003, P004, P005, P006, and P007.
(Authority for term: PTI 01-12022)

A. State and Federally Enforceable Section (continued)

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

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

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

The quarterly deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.
(Authority for term: PTI 01-12022)

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

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

Applicable Compliance Method:
Compliance shall be demonstrated by the record keeping requirements specified in Part II, Section A.5 of this permit.

b. Emission Limitation:
CO emissions from the RTO stack shall not exceed 8.8 pounds per hour and 38.5 tons per year.

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

Compliance with the annual limitation shall be assumed provided compliance is maintained with the pounds per hour emissioin limitation (the annual emission limitation was calculated at the maximum potential to emit for the CO emissions from the RTO stack).
(Authority for term: PTI 01-12022)

B. State Only Enforceable Section

1. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirements or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

Z003 - contour cutter for foam block;
Z004 - contour cutter for foam block;
Z005 - cutting line for foam blocks;
Z006 - automated cutting line;
Z007 - embosser;
Z008 - hot melt laminator of EPS to facing;
Z009 - hot melt laminator;
Z010 - heat reactive laminator;
Z011 - deaerator for boiler feed water;
Z012 - non-contact cooling tower;
Z013 - air compressors;
Z014 - grinder for foam recycle;
Z015 - scrap regrinder for foam recycle;
Z016 - scrap regrinder for foam recycle; and
Z017 - dedusting system for foam recycle.

B. State Only Enforceable Section (continued)

2. The permit to install for emissions units P002, P003, P004, P005, P006 and P007 was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by these emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

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

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

a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

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

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

a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);

b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and

c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Preexpander #1 (P002)

Activity Description: Hirsch 12000 Pre-expander

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P002 - Hirsch 12000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) Includes emissions from bead storage, dumping, transfer, pre-expansion and drying.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 28.9 tons per year. The requirements established pursuant to this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period. The usage of beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

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

II. Operational Restrictions

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

(less than 28.9 tons OC/yr emissions) = [(Wn)(Pn/100)(En)(1 ton/2000 pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1 ton/2000 pounds)(1- CE)]

where,

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements (continued)

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

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

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements (continued)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements (continued)

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P002 - Hirsch 12000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) Includes emissions from bead storage, dumping, transfer, pre-expansion and drying.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Preexpander #2 (P003)

Activity Description: Idro PJX 4000 Pre-expander

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P003 - Idro PJX 4000 expandable polystyrene resin bead pre-expander vented to a regenerative thermal oxidizer (RTO) (6,000 lbs/hr) Includes emissions from bead storage, dumping, transfer, pre-expansion and drying.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 14.04 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 28.9 tons per year. The requirements established pursuant to this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P002 and P003 shall not exceed 28.9 tons per rolling, 12-month period. The usage of beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

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

II. Operational Restrictions

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

(less than 28.9 tons OC/yr emissions) = [(Wn)(Pn/100)(En)(1 ton/2000 pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1 ton/2000 pounds)(1- CE)]

where,

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

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

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

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

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

d. The corresponding pentane content for each type of EPS resin bead processed in emissions unit P003, in percent, by weight.
(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

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

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

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

g. A calculation of the total OC emissions (in tons) for all bead types used in emissions units P002 and P003 during the rolling, 12-month period (the sum of the results of paragraph f. above for all bead types divided by 2000 lbs/ton).
(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements (continued)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

V. Testing Requirements (continued)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements (continued)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P003 - Idro PJX 4000 expandable polystyrene resin bead pre-expander vented to the RTO (6,000 lbs/hr). Includes emissions from bead storage, dumping, transfer, pre-expansion and drying.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Bead Aging Bag Farm (P004)

Activity Description: Bead aging bag farm, (20) 4,000 cubic foot bags, enclosed and vented to emissions control device (boilers)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P004 - Enclosed expanded resin bead aging bag farm vented to RTO. Includes emissions from transfer and aging.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	OC emissions in the RTO stack from this emissions unit shall not exceed 5.85 pounds per hour. See section A.I.2.a below. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack) from this emissions unit shall not exceed 8.3 tons per rolling, 12-month period. The usage of beads is restricted by term A.I.2.b and term A.II.2 below.

2. Additional Terms and Conditions

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

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

II. Operational Restrictions

1. The permittee shall maintain a permanent total enclosure (PTE) around this emissions unit such that OC emissions are captured and contained for discharge through the regenerative thermal oxidizer. The permittee shall demonstrate compliance with the following criteria, identified by USEPA Method 204, to satisfy the total enclosure requirement:

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

1. The permittee shall install, maintain and operate a monitoring device which measures either the differential pressure between the inside and outside of the PTE or the FV of air through an NDO. The monitoring device shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

The permittee shall record either the pressure differential across the PTE or the FV of air through an NDO during each three hour block of time to ensure that it is maintained at a minimum of either 0.007 inches of water or 200 fpm, respectively. The permittee shall record the duration, cause and all corrective actions taken, when either the observed differential pressure is less than 0.007 inches of water or the FV of air through an NDO is less than 200 fpm.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

b. The total hours emissions unit P004 operated.

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements (continued)

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

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

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

a. All 3-hour block periods of time during which the expanded resin bead aging enclosure was not maintained at either the required differential pressure or FV of air specified above.

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

V. Testing Requirements (continued)

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

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

Compliance with this emission limitation shall be demonstrated through the emission testing requirements specified in A.V.1.c below.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

The emission testing shall be conducted within 6 months following startup of emissions unit P003 and completion of ductwork to the RTO.

The emission testing shall be conducted to demonstrate compliance with the capture efficiency and control efficiency requirements, and the summation of mass emission limitations for organic compounds of 1.64 lbs OC/hr from Pre-expander 1 (P002); 1.64 lbs OC/hr from Pre-expander 2 (P003); 5.85 lbs OC/hr from the Bag Farm (P004); 1.64 lbs OC/hour from Mold Machine 1 (P005); and 1.1 lbs OC/hr from Mold Machine 2 (P006).

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

The test(s) shall be conducted while the emissions units P002, P003, P004, P005 and P006 that are vented to the RTO are operating at or near their maximum capacity, unless otherwise specified or approved by the Ohio EPA, Central District Office.

V. Testing Requirements (continued)

The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995 or in accordance with methods and procedures approved by the Ohio EPA. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with OAC rule 3745-21-10(C). The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Central District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Ohio EPA, Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emission test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA, Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Central District Office.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P004 - Enclosed expanded resin bead aging bag farm vented to RTO. Includes emissions from transfer and aging.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Mold #1 (P005)

Activity Description: Idro 24' block mold

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P005 - Idro 24-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.64 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 14.0 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 35.6 tons per year. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period. The usage of resin beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (1.65 pounds stack and 14.0 pounds fugitive emissions per hour) are based on the potential to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with this emission limitation.

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

II. Operational Restrictions

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

(less than 35.6 tons OC/yr emissions) = [(Wn)(Pn/100)(En)(1 ton/2000 pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1 ton/2000 pounds)(1- CE)]

where,

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements (continued)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

1.a Emission Limitation:
OC emissions in the RTO stack from this emissions unit shall not exceed 2.34 pounds per hour.
Applicable Compliance Method:
This emission limitation was established by multiplying the emissions unit's maximum hourly aged resin bead material usage weight (W), in pounds, by the maximum pentane content of the resin bead, in percent by weight (P) by the average percentage of pentane lost (emitted) during the block molding process (E) by the capture efficiency (CE) and by 1 minus the destruction efficiency (DE); as follows:

6,000 lbs of aged resin bead material per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) multiplied by 0.12 average percentage of pentane emitted (E) during the block molding process multiplied by 0.7 (CE) and by 0.05 (1 - DE) = 1.64 lbs of OC/hr.

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements (continued)

1.b Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 14.0 pounds per hour.

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

6,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 average percentage ofpentane emitted (E) multiplied by 0.3 (1 -CE) = 14.0 lbs of OC/hr.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P005 - Idro 24-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Mold #2 (P006)

Activity Description: Idro 16' block mold

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P006 - Idro 16-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	Organic compound (OC) emissions in the RTO stack from this emissions unit shall not exceed 1.1 pounds per hour. See section A.I.2.a below. Fugitive OC emissions from this emissions unit shall not exceed 9.36 pounds per hour. OC emissions (stack and fugitive) from this emissions unit shall not exceed 28.9 tons per year. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions (stack and fugitive) from emissions units P005 and P006 shall not exceed 35.6 tons per rolling, 12-month period. The usage of resin beads is restricted by term A.II.1 below.

2. Additional Terms and Conditions

2.a The hourly OC emission limitations (1.1 pounds stack and 9.36 pounds fugitive emissions per hour) are based on the potential to emit for this emissions unit. Therefore, it is not necessary to develop any additional monitoring, record keeping and/or reporting requirements to ensure compliance with this emission limitation

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

II. Operational Restrictions

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

(less than 35.6 tons OC/yr emissions) = [(Wn)(Pn/100)(En)(1 ton/2000 pounds)(CE)(1 - DE) + (Wn)(Pn/100)(En)(1 ton/2000 pounds)(1- CE)]
where,

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements (continued)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

1.a Emission Limitation:
OC emissions in the RTO stack from this emissions unit shall not exceed 1.1 pounds per hour.

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

4,000 lbs of aged resin bead material per hour (W) multiplied by 0.065 lb of pentane per pound of aged resin bead material (P) by 0.12 the average percentage of pentane emitted (E) by 0.7 (CE) and by 0.05 (1 - DE) = 1.1 lbs of OC/hr.

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements (continued)

1.b Emission Limitation:
Fugitive OC emissions from this emissions unit shall not exceed 9.36 pounds per hour.

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

4,000 lbs of resin beads per hour (W) multiplied by 0.065 lb of pentane per pound of resin bead (P) by 0.12 pentane emitted (E) multiplied by 0.3 (1 - CE) = 9.36 lbs of OC/hr.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

1.c Emission Limitation:
OC emissions (stack and fugitive) from this emissions units P005 and P006 shall not exceed 28.9 tons per rolling, 12-month period.

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P006 - Idro 16-foot block molding machine with vacuum system exhausted to the RTO. (6,000 lbs /hr) Includes emissions from transfer, vacuum system exhaust and mold depressurization.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - Terms and Conditions for Emissions Units

Emissions Unit ID: Product storage and processing (P007)

Activity Description: Cutting and storage of molded products

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P007 - Product storage and processing. Includes emissions from hot wire cutting, grinding and storage of molded products.	OAC rule 3745-31-05(A)(3) (PTI 01-12022)	Organic compound (OC) emissions from this emissions unit shall not exceed 58.0 pounds per hour. See section A.I.2.a below. Compliance with this rule also includes compliance with the requirements of OAC rule 3745-31-05(C).
	OAC rule 3745-31-05(C)	OC emissions from this emissions unit shall not exceed 99.54 tons per rolling, 12-month period. The usage of resin bead material is restricted by term A.II.1. below.

2. Additional Terms and Conditions

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

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

II. Operational Restrictions

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

III. Monitoring and/or Record Keeping Requirements

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

IV. Reporting Requirements

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

2. The permittee shall submit quarterly deviation (excursion) reports that identify any exceedance of the combined rolling, 12-month resin bead usage for emissions units P002 and P003.

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

V. Testing Requirements

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

V. Testing Requirements (continued)

1.a Emission Limitation:
OC emissions from this emissions unit shall not exceed 58.0 lbs/hr.

Applicable Compliance Method:
This emission limitation was established by multiplying the maximum hourly product storage capacity (W), in pounds, by the maximum pentane content of the resin bead material for the molded blocks, in percent by weight (P) by the percentage of pentane lost (emitted) during the storage and divided by the number of hours in 2 weeks (E); as follows:

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

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

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

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

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

(Authority for term: OAC rule 3745-77-07(A)(1) and PTI 01-12022)

VI. Miscellaneous Requirements

None

B. State Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operation(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be employed. Additional applicable emissions limitations and/or control measures (if any) may be specified in narrative form following the table.

Operations, Property, and/or Equipment	Applicable Rules/ Requirements	Applicable Emissions Limitations/Control Measures
P007 - Product storage and processing. Includes emissions from hot wire cutting, grinding and storage.	none	none

2. Additional Terms and Conditions

None

II. Operational Restrictions

None

III. Monitoring and/or Record Keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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