



State of Ohio Environmental Protection Agency

**STREET ADDRESS:**

Lazarus Government Center  
50 W. Town St., Suite 700  
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184  
www.epa.state.oh.us

**MAILING ADDRESS:**

P.O. Box 1049  
Columbus, OH 43216-1049

1/15/2009

Certified Mail

Robin Bennett  
Owens Corning Foam Insulation, LLC  
400 Case Avenue  
Newark, OH 43055-5805

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 1677120043  
Permit Number: P0103969  
Permit Type: OAC Chapter 3745-31 Modification  
County: Summit

|    |                      |
|----|----------------------|
| No | TOXIC REVIEW         |
| No | PSD                  |
| No | SYNTHETIC MINOR      |
| No | CEMS                 |
| No | MACT                 |
| No | NSPS                 |
| No | NESHAPS              |
| No | NETTING              |
| No | MAJOR NON-ATTAINMENT |
| No | MODELING SUBMITTED   |

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

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

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Akron Regional Air Quality Management District. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page <http://www.epa.state.oh.us/dapc>.

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 *Via E-Mail Notification*  
Akron Regional Air Quality Management District

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director





**State of Ohio Environmental Protection Agency  
Division of Air Pollution Control**

**FINAL**

**Air Pollution Permit-to-Install  
for  
Owens Corning Foam Insulation, LLC**

Facility ID: 1677120043  
Permit Number: P0103969  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 1/15/2009  
Effective: 1/15/2009





**Air Pollution Permit-to-Install**  
for  
Owens Corning Foam Insulation, LLC

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State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** P0103969  
**Facility ID:** 1677120043  
**Effective Date:** 1/15/2009

## Authorization

Facility ID: 1677120043  
Facility Description: Plastics Foam Products.  
Application Number(s): A0036049  
Permit Number: P0103969  
Permit Description: Modification to existing extruded polystyrene foam board manufacturing plant consisting of two barometric extruders and board finishing and shaping equipment.  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$2,000.00  
Issue Date: 1/15/2009  
Effective Date: 1/15/2009

This document constitutes issuance to:

Owens Corning Foam Insulation, LLC  
170 South Avenue  
P.O. Box 37  
Tallmadge, OH 44278-0037

Of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Akron Regional Air Quality Management District  
146 South High Street, Room 904  
Akron, OH 44308  
(330)375-2480

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: P0103969  
 Permit Description: Modification to existing extruded polystyrene foam board manufacturing plant consisting of two barometric extruders and board finishing and shaping equipment.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

|                                   |                        |
|-----------------------------------|------------------------|
| <b>Emissions Unit ID:</b>         | <b>P002</b>            |
| Company Equipment ID:             | Barometric Leg #2      |
| Superseded Permit Number:         | 16-02388               |
| General Permit Category and Type: | Not Applicable         |
| <b>Emissions Unit ID:</b>         | <b>P003</b>            |
| Company Equipment ID:             | Barometric Leg #3      |
| Superseded Permit Number:         | 16-02379               |
| General Permit Category and Type: | Not Applicable         |
| <b>Emissions Unit ID:</b>         | <b>P006</b>            |
| Company Equipment ID:             | Finishing Equipment #2 |
| Superseded Permit Number:         | 16-02388               |
| General Permit Category and Type: | Not Applicable         |
| <b>Emissions Unit ID:</b>         | <b>P007</b>            |
| Company Equipment ID:             | Finishing Equipment #3 |
| Superseded Permit Number:         |                        |
| General Permit Category and Type: | Not Applicable         |



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** P0103969  
**Facility ID:** 1677120043  
**Effective Date:** 1/15/2009

## **A. Standard Terms and Conditions**



## **1. Federally Enforceable Standard Terms and Conditions**

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
  - (1) Standard Term and Condition A. 2.a), Severability Clause
  - (2) Standard Term and Condition A. 3.c) through A. 3.e) General Requirements
  - (3) Standard Term and Condition A. 6.c) and A. 6.d), Compliance Requirements
  - (4) Standard Term and Condition A. 9., Reporting Requirements
  - (5) Standard Term and Condition A. 10., Applicability
  - (6) Standard Term and Condition A. 11.b) through A. 11.e), Construction of New Source(s) and Authorization to Install
  - (7) Standard Term and Condition A. 14., Public Disclosure
  - (8) Standard Term and Condition A. 15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
  - (9) Standard Term and Condition A. 16., Fees
  - (10) Standard Term and Condition A. 17., Permit Transfers

## **2. Severability Clause**

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

## **3. General Requirements**

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



- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

**4. 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, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Akron Regional Air Quality Management District.



(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Akron Regional Air Quality Management District. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the Akron Regional Air Quality Management District every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

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

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

## 5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Akron Regional Air Quality Management District in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

## 6. Compliance Requirements

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

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

c) 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:



- (1) 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.
  - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) 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.
- d) The permittee shall submit progress reports to the Akron Regional Air Quality Management District 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:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) 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.

## **7. Best Available Technology**

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

## **8. 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.

## **9. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Akron Regional Air Quality Management District.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Akron Regional Air Quality Management District. 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.)

## **10. Applicability**

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

## **11. Construction of New Sources(s) and Authorization to Install**

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit 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) by submitting a certification from the authorized 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 authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed through completion of the annual PER covering the last period of operation of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit 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). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the PER covering the last period the emissions unit operated.



No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a PER, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

## **12. Permit-To-Operate Application**

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

## **13. Construction Compliance Certification**

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.
- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

## **14. Public Disclosure**

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

## **15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations**

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

## **16. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** P0103969  
**Facility ID:** 1677120043  
**Effective Date:** 1/15/2009

**17. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Akron Regional Air Quality Management District must be notified in writing of any transfer of this permit.

**18. Risk Management Plans**

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

**19. 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.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
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**Facility ID:** 1677120043  
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## **B. Facility-Wide Terms and Conditions**



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** P0103969  
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**Effective Date:** 1/15/2009

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
  - a) None.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install**  
**Permit Number:** P0103969  
**Facility ID:** 1677120043  
**Effective Date:** 1/15/2009

## **C. Emissions Unit Terms and Conditions**



**1. P002, Barometric Leg #2**

**Operations, Property and/or Equipment Description:**

polystyrene foam board extrusion line 2 - barometric leg

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements  | Applicable Emissions Limitations/Control Measures  |
|----|--|--|
| a. | OAC rule 3745-31-05(A)(3)  | See b)(2)a. below<br><br>Scenario 1 or 2A:<br><br>When employing a blowing agent containing any volatile organic compound (VOC), the VOC emissions shall not exceed 0.39 lbs/hr and 1.69 tons/yr.<br><br>See b)(2)b. below<br><br>Scenario 2B:<br><br>When employing a blowing agent containing any VOC, the VOC emissions shall not exceed 0.39 lbs/hr and 1.69 tons/yr.<br><br>See b)(1)e. below for a description of each scenario. |
| b. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid nonattainment New Source Review) | Annual hours of operation for this emissions unit shall not exceed 3,240 hours, based on a rolling 12-month summation of the operating hours, when employing a blowing agent containing any VOC.<br><br>The emissions of VOC from emissions units P002 and P006, combined, shall not exceed 32.8 tons per year, based upon a rolling, 12-month summation of the  |



|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures |
|----|-------------------------------|---|
|    |                               | monthly emissions.                                |
| c. | OAC rule 3745-21-07(G)(2)     | See b)(2)c. and b)(2)d. below.                    |

(2) Additional Terms and Conditions

- a. Before modifying or operating P002 under the terms and conditions of this Permit to Install (PTI), the permittee shall select an operating scenario with which to comply. Scenario 1 or 2A involves the modification of P002 such that P002 can no longer employ ODS-containing blowing agents. Scenario 2B allows for the continued use of ODS-containing blowing agents in P002.
- b. Scenario 1 or 2A: The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound (OC) emissions from this air contaminant source since the non-ODS blowing agents that do not contain VOC are not air contaminants for which a National Ambient Air Quality Standard (NAAQS) has been established or a precursor of an air contaminant for which a NAAQS has been established.
- c. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

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

- d. The requirement that no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements related to this limitation shall be void.
- e. Scenario 1: During or around September 2009, the Barometric Leg #2 (P002) and Barometric Leg #3 (P003) extruders will be replaced, and the blowing agent will be converted (from HCFC-142b to the non-ODS containing blowing agent). The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2A: During or around September 2009, the Barometric Leg #2 (P002) extruder will be replaced, and the new (non-ODS) blowing agent will be run in P002. The new extruder will increase the throughput capacity of P002. Barometric Leg #3 (P003) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P003's extruder will be replaced, and P003 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.



Scenario 2B: In September 2009, the Barometric Leg #3 (P003) extruder will be replaced and the new (non-ODS) blowing agent will be run in P003. The new extruder will decrease the throughput capacity of P003. Barometric Leg #2 (P002) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P002's extruder will be replaced, and P002 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

c) Operational Restrictions

- (1) Scenario 1 or 2A the permittee shall only employ the following blowing agents in this emissions unit:
  - a. tetrafluoroethane (HFC-134a) - organic compound;
  - b. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - c. 1,1-difluoroethane (HFC-152a) - organic compound;
  - d. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) - organic compound;
  - e. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) - organic compound;
  - f. USEPA SNAP approved blowing agent containing VOC
- (2) Scenario 2B the permittee shall only employ the following blowing agents in this emissions unit:
  - a. Chlorodifluoroethane (HCFC-142b) – title VI, class II compound;
  - b. tetrafluoroethane (HFC-134a) - organic compound;
  - c. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - d. 1,1-difluoroethane (HFC-152a) - organic compound;
  - e. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) - organic compound;
  - f. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) - organic compound;
  - g. USEPA SNAP approved blowing agent containing VOC
- (3) Scenario 2B - The permittee shall establish operating procedures that will minimize HCFC emissions by maintaining the efficiency of the blowing agent addition and board forming operations.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall evaluate the blowing agent efficiency on a once per shift frequency to ensure that material is being added to meet product specification by performing a "rate check" or by recording the data from the micro motion mass-flow sensor. Rate checks may be conducted by weighing the amount of blowing agent introduced into the



extrusion line during a given period of time, by supplying blowing agent from a container, which is weighed at the beginning and end of the evaluation; or the data from the micro motion mass-flow sensors, which control the flow rate of the blowing agent, will be averaged on a per shift frequency and used to determine blowing agent percent to the extrusion line; or by other procedures approved by the Akron RAQMD and Ohio EPA.

The permittee shall maintain records of the performance of the blowing agent by rate check or micro-motion flow sensor, on the extrusion line, including date and time, results, i.e., whether the blowing agent rate was within, above, or below specification; whether corrective actions were initiated; and whether such actions were effective, as shown by the next rate check or micro-motion data.

- (2) The permittee shall evaluate the efficiency of the board forming operations (extrusion die and shaping device at the inlet bulkhead of the barometric leg) on a once per day frequency to ensure the amount of scrap material generated is minimized by performing a "trim loss check." The trim loss checks may be conducted by one of the following methods:
- a. calculating the percentage of trim loss by using the weights of the untrimmed and trimmed product; or
  - b. calculating the percentage trim loss using untrimmed and trimmed product widths;
  - c. calculating the percentage trim loss based on weight and width of a trimmed board and the width of an untrimmed board; or
  - d. by other procedures approved by the Akron RAQMD and Ohio EPA.

The permittee shall maintain records of the performance of trim loss checks on the extrusion line, including date and time, results, i.e., whether the trim was within, above, or below specification; whether corrective actions were initiated; and whether such actions were effective, as shown by the next rate check.

- (3) The permittee shall calculate and record the following information on a daily basis for this emissions unit:
- a. total amount of raw materials consumed, in pounds (i.e. polystyrene resin + blowing agent + colorant + flame retardant + fillers);
  - b. record of each blowing agent employed, the amount used, and the number of hours it was employed;
  - c. the number of hours of operation; and
  - d. the VOC emission rate, calculated in accordance with the equations in f)(1)a. below, in pounds per hour (average).
- (4) The permittee shall maintain monthly record of the following information for this emissions unit:



- a. the number of hours of operation for each month, when a blowing agent that contains any VOC is employed;
  - b. the rolling, 12-month summation of the operating hours, when a blowing agent that contains any VOC is employed.
- (5) The permittee shall maintain monthly records of the following information for emissions units P002 and P006, combined:
- a. the VOC emissions, in tons; and
  - b. the rolling, 12-month summation of the VOC emissions, in tons.
- (6) The permittee shall collect and record the following information for this emissions unit:
- a. the company identification for each liquid organic raw material and each cleanup material employed; and
  - b. documentation on whether or not each liquid raw material and each cleanup material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- e) Reporting Requirements
- (1) The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation, when a blowing agent containing any VOC is employed for this emissions unit.
  - (2) The permittee shall submit quarterly deviation (excursion) reports which include an identification of each day which the average hourly total VOC emissions exceeded 0.39 lbs /hr, and the actual average hourly VOC emissions for each such day.
  - (3) The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC.
  - (4) These quarterly deviation (excursion) reports shall be submitted to the Director (appropriate district Office or local air agency) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviation occurred during a calendar quarter, the permittee shall submit a report which states that no deviation occurred during the calendar quarter.
  - (5) The permittee shall submit quarterly written reports which (a) identify all days during which either the blowing efficiency or trim loss checks results in out of specification results and (b) describe any corrective actions taken bring the results back into proper specifications. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.
  - (6) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any blowing agent other than those allowed in c)(1) or c)(2) above. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.



- (7) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing if a "photochemically reactive material" (as defined in OAC rule 3745-21-01(C)(5)) is employed in the emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after such an occurrence.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) in b)(1) above shall be determined in accordance with the following methods:

a. Emissions Limitation:

The VOC emissions shall not exceed 0.39 lbs/hr and 1.69 tons/yr.

Applicable Compliance Method:

Compliance with the hourly allowable VOC emission limitation above shall be determined in accordance with the following equation:

$$\text{Hourly VOC rate (lbs/hr)} = \text{SUM (M)} \times \text{EF} \times P_{\text{voc}} \text{ for each product recipe}$$

Where:

M = actual raw material in - feed rate factoring in buoyancy factor entering extruder

EF = emission factor, 0.0004 VOC/lb raw material (accounts for buoyancy factor)

$P_{\text{VOC}}$  = Concentration VOC blend/BA % content of in-feed.

The constant factors were developed by the permittee as the result of stack testing performed at a similar facility for the same product mix.

Compliance with the annual allowable VOC emission limitation above shall be determined by multiplying the hourly allowable VOC emission limitation by 8,760 hours per year and divide the result by 2,000 to convert to tons. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

b. Emission Limitation:

Annual hours of operation for this emissions unit shall not exceed 3,240 hours based on a rolling 12-month summation of operating hours, when employing a blowing agent containing any VOC.

Applicable Compliance Method:

Compliance with the annual allowable hours of operation limitation above shall be demonstrated through the record keeping requirements established in d)(4) above.



c. Emission Limitation:

The emissions of VOC from emissions units P002 and P006, combined, shall not exceed 32.8 tons per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation above shall be demonstrated through the record keeping requirements established in d)(5) above.

g) Miscellaneous Requirements

1. None.



**2. P003, Barometric Leg #3**

**Operations, Property and/or Equipment Description:**

Foam Insulation Board Manufacturing - Line 3 Barometric Leg

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures  |
|----|-------------------------------|--|
| a. | OAC rule 3745-31-05(A)(3)     | See b)(2)a. below.<br><br>Scenario 1 or 2B:<br><br>See b)(2)b. below<br><br>Scenario 2A:<br><br>The organic compound (OC) emissions shall not exceed 1.47 lbs/hr.<br><br>See c)(3) below.<br><br>See b)(2)e. below for a description of each scenario. |
| b. | OAC rule 3745-31-13 thru 20   | Scenario 1 or 2B:<br><br>N/A<br><br>Scenario 2A:<br><br>The emissions of OC shall not exceed 6.44 tons per year based upon a rolling, 12-month summation of the monthly emissions.   |
| c. | OAC rule 3745-21-07(G)(2)     | See b)(2)c. and b)(2)d. below.   |



(2) Additional Terms and Conditions

- a. Before modifying or operating P003 under the terms and conditions of this Permit to Install (PTI), the permittee shall select an operating scenario with which to comply. Scenario 1 or 2B involves the modification of P003 such that P003 can no longer employ ODS-containing blowing agents. Scenario 2A allows for the continued use of ODS-containing blowing agents in P003.
- b. Scenario 1 or 2B: The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the organic compound (OC) emissions from this air contaminant source since the non-ODS blowing agents are not air contaminants for which a National Ambient Air Quality Standard (NAAQS) has been established or a precursor of an air contaminant for which a NAAQS has been established.
- c. To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07 (G) (2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

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

- d. The requirement that no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements related to this limitation shall be void.
- e. Scenario 1: During or around September 2009, the Barometric Leg #2 (P002) and Barometric Leg #3 (P003) extruders will be replaced, and the blowing agent will be converted (from HCFC-142b to the non-ODS containing blowing agent). The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2A: During or around September 2009, the Barometric Leg #2 (P002) extruder will be replaced, and the new (non-ODS) blowing agent will be run in P002. The new extruder will increase the throughput capacity of P002. Barometric Leg #3 (P003) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P003's extruder will be replaced, and P003 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2B: In September 2009, the Barometric Leg #3 (P003) extruder will be replaced and the new (non-ODS) blowing agent will be run in P003. The new extruder will decrease the throughput capacity of P003. Barometric Leg #2 (P002) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P002's extruder will be replaced, and P002 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008)



will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

c) Operational Restrictions

- (1) Scenario 1 or 2B: The permittee shall employ only the following blowing agents in this emissions unit:
  - a. tetrafluoroethane (HFC-134a) - organic compound;
  - b. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - c. 1,1-difluoroethane (HFC-152a) - organic compound;
  - d. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) – organic compound; or
  - e. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) – organic compound.
- (2) Scenario 2A: The permittee shall employ only the following blowing agents in this emissions unit:
  - a. chlorodifluoroethane (HCFC-142b) - title VI, class II compound;
  - b. tetrafluoroethane (HFC-134a) - organic compound;
  - c. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - d. 1,1-difluoroethane (HFC-152a) - organic compound;
  - e. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) – organic compound; or
  - f. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) – organic compound.
- (3) Scenario 2A: The permittee shall establish operating procedures that will minimize HCFC emissions by maintaining the efficiency of the blowing agent addition and board forming operations.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall evaluate the blowing agent efficiency on a once per shift frequency to ensure that material is being added to meet product specification by performing a "rate check" or by recording the data from the micro motion mass-flow sensor. Rate checks may be conducted by weighing the amount of blowing agent introduced into the extrusion line during a given period of time, by supplying blowing agent from a container, which is weighed at the beginning and end of the evaluation; or the data from the micro motion mass-flow sensors, which control the flow rate of the blowing agent, will be averaged on a per shift frequency and used to determine blowing agent percent to the extrusion line; or by other procedures approved by the Akron RAQMD and Ohio EPA.

The permittee shall maintain records of the performance of the blowing agent by rate check or micro-motion flow sensor, on the extrusion line, including date and time, results, i.e., whether the blowing agent rate was within, above, or below specification;



whether corrective actions were initiated; and whether such actions were effective, as shown by the next rate check or micro-motion data.

- (2) The permittee shall evaluate the efficiency of the board forming operations (extrusion die and shaping device at the inlet bulkhead of the barometric leg) on a once per day frequency to ensure the amount of scrap material generated is minimized by performing a "trim loss check." The trim loss checks may be conducted by one of the following methods:
  - a. calculating the percentage of trim loss by using the weights of the untrimmed and trimmed product; or
  - b. calculating the percentage trim loss using untrimmed and trimmed product widths;
  - c. calculating the percentage trim loss based on weight and width of a trimmed board and the width of an untrimmed board; or
  - d. by other procedures approved by the Akron RAQMD and Ohio EPA.
  - e. The permittee shall maintain records of the performance of trim loss checks on the extrusion line, including date and time, results, i.e., whether the trim was within, above, or below specification; whether corrective actions were initiated; and whether such actions were effective, as shown by the next rate check.
- (3) Scenario 2A: The permittee shall calculate and record the following information on a daily basis:
  - a. total amount of raw materials consumed, in pounds (i.e. polystyrene resin + blowing agent + colorant + flame retardant + fillers);
  - b. record of each blowing agent employed, the amount used, and the number of hours it was employed;
  - c. the number of hours of operation; and
  - d. the OC emission rate, calculated in accordance with the equation in f)(1)a. below, in pounds per hour (average).
- (4) Scenario 1 or 2B: The permittee shall maintain a record of each blowing agent employed on a daily basis.
- (5) The permittee shall collect and record the following information for this emissions unit:
  - a. the company identification for each liquid organic raw material and each cleanup material employed; and
  - b. documentation on whether or not each liquid raw material and each cleanup material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).



e) Reporting Requirements

- (1) Scenario 2A: The permittee shall submit deviation (excursion) reports which include an identification of each day during which the average hourly OC emissions exceeded 1.47 pounds per hour, and the actual average hourly OC emissions for each such day.
- (2) These quarterly deviation (excursion) reports shall be submitted to the Director (appropriate district Office or local air agency) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviation occurred during a calendar quarter, the permittee shall submit a report which states that no deviation occurred during the calendar quarter.
- (3) The permittee shall submit quarterly written reports which (a) identify all days during which either the blowing efficiency or trim loss checks results in out of specification results and (b) describe any corrective actions taken bring the results back into proper specifications. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarter.
- (4) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing of any daily record showing the use of any blowing agent other than those allowed in c)(1) or c)(2) above. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 30 days following the end of the calendar month.
- (5) The permittee shall notify the Director (the appropriate Ohio EPA District Office or local air agency) in writing if a "photochemically reactive material" (as defined in OAC rule 3745-21-01(C)(5)) is employed in the emissions unit. The notification shall include a copy of such record and shall be sent to the Director (the appropriate Ohio EPA District Office or local air agency) within 45 days after such an occurrence.

f) Testing Requirements

- (1) Compliance with the emission limitation(s) b)(1) above shall be determined in accordance with the following methods:

a. Emissions Limitation:

Scenario 2A: Organic compound (OC) emissions shall not exceed 1.47 lbs/hr

Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation above shall be determined in accordance with the following equation:

$$\text{Hourly OC rate (lbs/hr)} = (M / 2619.17) \times 1.155$$

Where:

M = the consumption rate in lbs/hr of all raw materials exiting the extruder (i.e., polystyrene resin + blowing agent + colorant + flame retardant + fillers)



The constant factors were developed by the permittee as the result of stack testing performed at a similar facility for the same product mix.

b. Emissions Limitation:

Scenario 2A: The emissions of OC shall not exceed 6.44 tons per year based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable OC emission limitation shall be determined by multiplying the hourly allowable OC emission limitation by 8,760 hour per year and dividing the result by 2,000 to convert to tons. Therefore, as long as compliance with the hourly allowable OC emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

g) Miscellaneous Requirements

(1) None.



**3. P006, Finishing Equipment #2**

**Operations, Property and/or Equipment Description:**

Polystyrene foam board finishing equipment associated with line 2

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) None.
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures   |
|----|---|---|
| a. | OAC rule 3745-31-05(A)(3)<br>(Voluntary Restriction to avoid Best Available Technology (BAT)) | The particulate emissions (PE) shall not exceed 9.74 tons per year.<br><br>See b)(2)b. and b)(2)c. below.   |
| b. | OAC rule 3745-31-05(D)<br>(Synthetic Minor to avoid nonattainment New Source Review)          | Annual hours of operation for this emissions unit shall not exceed 3,240 hours, based on a rolling 12-month summation of the operating hours, when finishing foam boards containing any volatile organic compound (VOC) blowing agents.<br><br>The emissions of VOC from emissions units P002 and P006, combined, shall not exceed 32.8 tons per year, based upon a rolling, 12-month summation of the monthly emissions.<br><br>7.37 tons of VOC per year (fugitive warehouse emissions) |
| c. | OAC rule 3745-17-07(A)  | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.   |
| d. | OAC rule 3745-17-11(B)<br>Table 1   | Scenario 1 or 2A:<br><br>PE shall not exceed 5.34 lbs/hr.<br><br>Scenario 2B:   |



|  | Applicable Rules/Requirements | Applicable Emissions Limitations/Control Measures   |
|--|-------------------------------|---|
|  |                               | PE shall not exceed 5.05 lbs/hr.<br>See b)(2)a. below for a description of each scenario. |

(2) Additional Terms and Conditions

- a. Scenario 1: During or around September 2009, the Barometric Leg #2 (P002) and Barometric Leg #3 (P003) extruders will be replaced, and the blowing agent will be converted (from HCFC-142b to the non-ODS containing blowing agent). The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2A: During or around September 2009, the Barometric Leg #2 (P002) extruder will be replaced, and the new (non-ODS) blowing agent will be run in P002. The new extruder will increase the throughput capacity of P002. Barometric Leg #3 (P003) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P003's extruder will be replaced, and P003 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2B: In September 2009, the Barometric Leg #3 (P003) extruder will be replaced and the new (non-ODS) blowing agent will be run in P003. The new extruder will decrease the throughput capacity of P003. Barometric Leg #2 (P002) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P002's extruder will be replaced, and P002 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

- b. Permit to Install (PTI) P0103969 for this air contaminant source takes into account the use of a cyclone and a baghouse, whenever this air contaminant source is in operation, with a minimum overall control efficiency of 98.5%, by weight for PE, as a voluntary restriction as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).
- c. The particulate emissions from this emissions unit shall be vented to a cyclone and a baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

- (1) Scenario 1 or 2A the permittee shall only employ the following blowing agents in this emissions unit:
  - a. tetrafluoroethane (HFC-134a) - organic compound;
  - b. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - c. 1,1-difluoroethane (HFC-152a) - organic compound;



- d. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) - organic compound;
  - e. 1,1,1,3,3-pentafluorobutane (HFC-365 MFA) - organic compound;
  - f. USEPA SNAP approved blowing agent containing VOC
- (2) Scenario 2B the permittee shall only employ the following blowing agents in this emissions unit:
- a. Chlorodifluoroethane (HCFC-142b) – title VI, class II compound;
  - b. tetrafluoroethane (HFC-134a) - organic compound;
  - c. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - d. 1,1-difluoroethane (HFC-152a) - organic compound;
  - e. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) - organic compound;
  - f. 1,1,1,3,3-pentafluorobutane (HFC-365 MFA) - organic compound;
  - g. USEPA SNAP approved blowing agent containing VOC
- (3) Scenario 2B: The permittee shall establish operating procedures that will minimize HCFC emissions by maintaining the efficiency of the blowing agent addition and board forming operations.
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer=s recommendations, instructions, and operating manual(s).
- Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:
- a. the date and time the deviation began;
  - b. the magnitude of the deviation at that time;
  - c. the date the investigation was conducted;
  - d. the name(s) of the personnel who conducted the investigation; and
  - e. the findings and recommendations.



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

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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

The acceptable range across the baghouse is 0.1 to 5.0 inches of water.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

- (2) The permittee shall maintain monthly records of the following information for this emissions unit:
  - a. the number of hours of operation for each month, when finishing foam boards containing any VOC blowing agents;
  - b. the rolling, 12-month summation of the operating hours, when finishing foam boards containing any VOC blowing agents.
- (3) The permittee shall maintain monthly records of the following information for emissions units P002 and P006, combined:
  - a. the VOC emissions, in tons; and
  - b. the rolling, 12-month summation of the VOC emissions, in tons.



e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):
  - a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
  - b. an identification of each incident of deviation described in e)(1)a. above where a prompt investigation was not conducted;
  - c. an identification of each incident of deviation described in e)(1)a. above where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
  - d. an identification of each incident of deviation described in e)(1)a. above where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (2) The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month operating hours limitation, when finishing foam boards containing any VOC blowing agents.
- (3) The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emission limitation for VOC.
- (4) These quarterly deviation (excursion) reports shall be submitted to the Director (appropriate district Office or local air agency) by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter. If no deviation occurred during a calendar quarter, the permittee shall submit a report which states that no deviation occurred during the calendar quarter.

f) Testing Requirements

- (1) Compliance with the emission limitations and the operational restriction in b)(1) above shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
  
Scenario 1 or 2A: PE shall not exceed 5.34 lbs/hr.  
  
Scenario 2B: PE shall not exceed 5.05 lbs/hr.  
  
Applicable Compliance Method:  
  
If required, compliance with the hourly PE limitations above shall be determined by using the test method(s) and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.



b. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation for any stack from the emissions unit shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).

c. Emission Limitation:

Annual hours of operation for this emissions unit shall not exceed 3,240 hours based on a rolling 12-month amount of operating hours, when finishing foam boards containing any VOC blowing agents.

Applicable Compliance Method:

Compliance with annual allowable hours of operation limitation shall be demonstrated through the record keeping requirements established in d)(2) above.

d. Emission Limitation:

The emissions of VOC from emissions units P002 and P006, combined, shall not exceed 32.8 tons per year, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation above shall be demonstrated through the record keeping requirements established in d)(3) above.

e. Emission Limitation:

The particulate emissions (PE) shall not exceed 9.74 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual PE limitation above by multiplying the maximum hourly controlled PE rate [(148.25 pounds of PE per hour) x (1-0.985)=2.22 pounds of PE per hour] by the maximum annual number of hours of operation (8760 hours per year), and then dividing by 2000 pounds per ton.

f. Emission Limitation:

7.37 tons of VOC per year (fugitive warehouse emissions)



Applicable Compliance Method:

Compliance with the annual VOC emission limitation shall be determined in accordance with the following equation:

Annual VOC rate (tons per year) =  $SUM (M \times Trim\%)EF2 \times PMix \times 3240 \text{ hours}/2000$

SUM = summation of each VOC in the blowing agent mix

M = actual raw material in-feed rate factoring in buoyancy factor entering extruder

Trim% = percentage of material that is removed from board stock

EF2 = emission factor based on in-feed material less trim with buoyancy accounted for

PMix = concentration VOC blend/BA% content of in-feed

g) Miscellaneous Requirements

(1) None.



**4. P007, Finishing Equipment #3**

**Operations, Property and/or Equipment Description:**

foam board shaping and finishing equipment

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

|    | Applicable Rules/Requirements   | Applicable Emissions Limitations/Control Measures  |
|----|---|--|
| a. | OAC rule 3745-31-05(A)(3)<br>(Voluntary Restriction to avoid Best Available Technology (BAT)) | The particulate emissions (PE) shall not exceed 9.81 tons per year.<br><br>See b)(2)b. and b)(2)c. below.  |
| b. | OAC rule 3745-17-07(A)  | Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.  |
| c. | OAC rule 3745-17-11(B)<br>Table 1   | Scenario 1 or 2B:<br><br>PE shall not exceed 5.34 lbs/hr.<br><br>Scenario 2A:<br><br>PE shall not exceed 5.62 lbs/hr.<br><br>See b)(2)a. below for a description of each scenario. |

(2) Additional Terms and Conditions

a. Scenario 1: During or around September 2009, the Barometric Leg #2 (P002) and Barometric Leg #3 (P003) extruders will be replaced, and the blowing agent will be converted (from HCFC-142b to the non-ODS containing blowing agent). The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2A: During or around September 2009, the Barometric Leg #2 (P002) extruder will be replaced, and the new (non-ODS) blowing agent will be run in P002. The new extruder will increase the throughput capacity of P002.



Barometric Leg #3 (P003) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P003's extruder will be replaced, and P003 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

Scenario 2B: In September 2009, the Barometric Leg #3 (P003) extruder will be replaced and the new (non-ODS) blowing agent will be run in P003. The new extruder will decrease the throughput capacity of P003. Barometric Leg #2 (P002) will continue to run HCFC-142b through December 31, 2009. On December 31, 2009, P002's extruder will be replaced, and P002 will be converted to the non-ODS containing blowing agent. The Nelmor Grinder (P008) will continue to grind limited amounts of HCFC-142b containing foam until the inventory is exhausted.

- b. Permit to Install (PTI) P0103969 for this air contaminant source takes into account the use of a cyclone and a baghouse, whenever this air contaminant source is in operation, with a minimum overall control efficiency of 98.6%, by weight for PE, as a voluntary restriction as proposed by the permittee for the purpose of avoiding BAT requirements under OAC rule 3745-31-05(A)(3).
- c. The particulate emissions from this emissions unit shall be vented to a cyclone and a baghouse at all times the emissions unit is in operation.

c) Operational Restrictions

- (1) Scenario 1 or 2B: The permittee shall employ only the following blowing agents in this emissions unit:
  - a. tetrafluoroethane (HFC-134a) - organic compound;
  - b. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - c. 1,1-difluoroethane (HFC-152a) - organic compound;
  - d. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) – organic compound; or
  - e. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) – organic compound.
- (2) Scenario 2A: The permittee shall employ only the following blowing agents in this emissions unit:
  - a. chlorodifluoroethane (HCFC-142b) - title VI, class II compound;
  - b. tetrafluoroethane (HFC-134a) - organic compound;
  - c. 1,1,1-trifluoroethane (HFC-143a) - organic compound;
  - d. 1,1-difluoroethane (HFC-152a) - organic compound;
  - e. 1,1,1,3,3-pentafluoropropane (HFC-245 FA) – organic compound; or
  - f. 1,1,1,3,3-pentafluorobutane (HFC-365 MFC) – organic compound.



- (3) Scenario 2A: The permittee shall establish operating procedures that will minimize HCFC emissions by maintaining the efficiency of the blowing agent addition and board forming operations.

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop, in inches of water, across the baghouse when the controlled emissions unit(s) is/are in operation, including periods of startup and shutdown. The permittee shall record the pressure drop across the baghouse on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer=s recommendations, instructions, and operating manual(s).

Whenever the monitored value for the pressure drop deviates from the limit or range established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

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

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

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

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



The acceptable range across the baghouse is 0.1 to 5.0 inches of water.

This range or limit on the pressure drop across the baghouse is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted limit or range for the pressure drop based upon information obtained during future testing that demonstrate compliance with the allowable particulate emission rate for the controlled emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor permit modification.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify the following information concerning the operation of the baghouse during the operation of the emissions unit(s):

- a. each period of time (start time and date, and end time and date) when the pressure drop across the baghouse was outside of the acceptable range;
- b. an identification of each incident of deviation described in e)(1)a. above where a prompt investigation was not conducted;
- c. an identification of each incident of deviation described in e)(1)a. above where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
- d. an identification of each incident of deviation described in e)(1)a. above where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

If no deviations/excursions occurred during a calendar quarter, the report shall so state that no deviations occurred during the reporting period.

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

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) above shall be determined in accordance with the following methods:

- a. Emission Limitation:  
Scenario 1 or 2B: PE shall not exceed 5.34 lbs/hr.  
Scenario 2A: PE shall not exceed 5.62 lbs/hr.



Applicable Compliance Method:

If required, compliance with the hourly PE limitations above shall be determined by using the test method(s) and procedures in Methods 1-5 of 40 CFR Part 60, Appendix A.

b. Emission Limitation:

Visible particulate emissions from any stack shall not exceed 20 percent opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the visible PE limitation for any stack from the emissions unit shall be determined in accordance with the test method and procedures in OAC rule 3745-17-03(B)(1).

c. Emission Limitation:

The particulate emissions (PE) shall not exceed 9.81 tons per year.

Applicable Compliance Method:

The permittee shall demonstrate compliance with the annual PE limitation above by multiplying the maximum hourly controlled PE rate [(160.0 pounds of PE per hour) x (1-0.986)=2.24 pounds of PE per hour] by the maximum annual number of hours of operation (8760 hours per year), and then dividing by 2000 pounds per ton.

g) Miscellaneous Requirements

(1) None.