

## **STAFF DETERMINATION FOR THE APPLICATION TO CONSTRUCT UNDER THE PREVENTION OF SIGNIFICANT DETERIORATION REGULATIONS**

The federal Clean Air Act and regulations promulgated thereunder require that major air pollution stationary sources undergoing construction or modification comply with all applicable Prevention of Significant Deterioration (PSD) provisions and non-attainment area (NAA) requirements. Both of these provisions and requirements are referred to as the New Source Review (NSR) program. The federal PSD provisions govern emission increases in attainment areas for major stationary sources, which are all pollutant-emitting activities that belong to the same industrial grouping, are located on contiguous or adjacent properties, and are under common control with the potential to emit 250 tons per year or more of any pollutant regulated under the Clean Air Act, or 100 tons per year or more if the stationary source is identified as one of 28 stationary source categories. In non-attainment areas, the definition of major stationary source is one having at least 100 tons per year potential emissions. A major modification is one resulting in a contemporaneous increase in emissions which exceeds the significance level of one or more pollutants. Any changes in actual emissions within a five-year period are considered to be contemporaneous. In addition, Ohio now has incorporated the federal NSR program by rule in Ohio Administration Code (OAC) Chapter 3745-31.

Both PSD requirements and non-attainment area provisions require that certain analyses be performed before a facility can obtain a permit authorizing construction of a new stationary source or major modification to a major stationary source. The principal requirements of the PSD requirements are:

- 1) Best Available Control Technology (BACT) review - A detailed engineering review must be performed to ensure that BACT is being installed for the pollutants for which the new air contaminant source(s) is a major stationary source.
- 2) Ambient Air Quality Review - An analysis must be completed to ensure the continued maintenance of the National Ambient Air Quality Standards (NAAQS) and that any increases in ambient air pollutant concentrations do not exceed the incremental values set pursuant to the Clean Air Act.

For non-attainment areas, the requirements are:

- 1) Lowest Achievable Emissions Rate (LAER) - New major stationary sources must install controls that represent the lowest emission levels (highest control efficiency) that has been achieved in practice.
- 2) The emissions from the new major stationary source must be offset by a reduction of existing emissions of the same pollutant by at least the same amount, and a demonstration must be made that the resulting air quality shows a net air quality benefit. This is more completely described in the Emission Offset Interpretative Ruling as found in Appendix S of 40 CFR Part 51.
- 3) The facility must certify that all major stationary sources owned or operated in the state by the same entity are either in compliance with the existing State Implementation Plan (SIP) or are on an approved schedule resulting in full compliance with the SIP.

For rural ozone non-attainment areas, the requirements are:

- 1) LAER - New major stationary sources must install controls that represent the lowest emissions levels (highest control efficiency) that has been achieved in practice.
- 2) The facility must certify that all major stationary sources owned or operated in the state by the same entity are either in compliance with the existing SIP or are on an approved schedule resulting in full compliance with the SIP.

Finally, New Source Performance Standards (NSPS), New Emissions Standards for Hazardous Air Pollutants (NESHAP), including any Maximum Achievable Control Technology (MACT) standards, SIP emission standards and public participation requirements must be followed in all cases.

### Site Description

The facility is in Tallmadge, Ohio, which is located in Summit County.

Under Section 107 of the Clean Air Act as of June 24, 1992, this area (Summit County) was classified as attainment for all of the criteria pollutants, i.e., total suspended particulates (PM), particulate matter less than 10 microns (PM<sub>10</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and lead (Pb).

On June 15, 2004, Summit County was classified as a non-attainment area for volatile organic compounds (ozone).

### Facility Description

Owens Corning operates a polystyrene foam insulation manufacturing facility located at 170 South Avenue in Tallmadge, Ohio, in Summit County. The facility operates three polystyrene foam board extrusion lines (line number 1, 2, and 3) to produce insulating board products for the construction market.

Owens Corning is planning to increase the actual polystyrene foam board production rate by modifying equipment used in processing line number 3.

New Source Review (NSR) which includes PSD and NAA Applicability

### PSD

The existing Owens Corning facility is currently a major stationary source pursuant to NSR regulations because the potential to emit (PTE) emissions from the facility are over the 250 tons per year of one of the criteria and/or regulated pollutants (in this case, emissions of chlorodifluoroethane, HCFC-142b, which is a Class II Ozone Depleting Substance under Title IV of the Clean Air Act)). As such, emissions resulting from any modification to the facility are evaluated against the PSD significant emission rates to determine if PSD applies [in this case, the proposed emissions increase for the proposed project is greater than zero of a regulated pollutant.]. See Table 1 below.

Note, in evaluating other operations located at the Tallmadge, Ohio, facility that increase their actual particulate matter emissions that might trigger the significant level mentioned above due to the physical change on Line no. 3, Owens Corning determined that only 2.07 tons per year of actual particulate matter emissions increased and this amount is below the significant level of 15 tons per year for particulate matter and therefore PSD review is not required for particulate matter.

Table 1 shows the emissions from the proposed project in terms of PSD applicability and review.

Table 1

<u>Pollutant</u>		<u>Tons/Year</u>	<u>Significant Level</u>
Chlorodifluoroethane, HCFC-142b	6.44*	Any rate**	

\*Note Owens Corning is requesting a six tons increase of chlorodifluoroethane, HCFC-142b over current production levels of polystyrene foam for the physical changes to Line #3 Barometric Leg Line at the Tallmadge, Ohio. However, the cost effectiveness analysis associated with the BACT analysis, Owens Corning used 376 tons per year of chlorodifluoroethane, HCFC-142b and this value was based upon 15% of future actual emissions over 2003 polystyrene foam production.

\*\* Note that chlorodifluoroethane, HCFC-142b is a Class II Ozone Depleting Substance under Title IV of the Clean Air Act and therefore considered to be a regulated pollutant. As such, since there is no significant level emission threshold for that pollutant and any increase is considered to be significant and therefore triggers PSD.

Owens Corning perform a facility wide

Based upon the above information, PSD review is required for chlorodifluoroethane, HCFC-142b.

Fugitive emissions from proposed project are not included because the facility is not one of the 28 stationary source categories, nor are they one of the NSPS and NESHAPS promulgated before August 8, 1980. See below the applicable NSPS and NESHAPS.

#### NAA

Chlorodifluoroethane, HCFC-142b, is not a criteria pollutant because a NAAQS has not been established for this compound. In addition, chlorodifluoroethane, HCFC-142b, does not contribute to the formation of any pollutant for which a NAAQS has been established. Thus, NAA have not been established for chlorodifluoroethane, HCFC-142b and chlorodifluoroethane, HCFC-142b, is not regulated under these regulations in relationship to the formation of any other non-attainment pollutants. Therefore, NAA requirements are not applicable. See more details under the title Ozone Depleting Substances - 40 CFR Part 82 below.

Federal Requirements other than NSR which include NSPS/NESHAP regulations.

- ◆ NSPS 40 CFR 60 Applicability
- ◆ NESHAP 40 CFR 63 Applicability

#### NSPS 40 CFR Part 60 Applicability

Standards for certain specific new or modified sources are promulgated under the NSPS. The Owens Corning Tallmadge facility operations do not fall within a category currently regulated by NSPS and therefore is not applicable to proposed change.

## NESHAP 40 CFR Part 63 applicability

The operations conducted at the facility are not included in the categories of sources subject to emissions standards for hazardous air pollutants under 40 CFR Part 63, nor is the proposed change anticipated to result in emissions of any hazardous air pollutant (HAP). Therefore the requirements of 40 CFR Part 61 and 40 CFR Part 63 governing constructed or reconstructed major sources of HAPs are not applicable.

## Accidental Release Prevention/Risk Management - 40 CFR Part 68

The proposed change will not meet the criteria for having site substances beyond the 112(r) enumerated threshold of the Clean Air Act Amendments of 1990. Therefore, a Risk Management Plan will not need to be submitted.

## Ozone Depleting Substances - 40 CFR Part 82

Hydro chlorofluorocarbons (HCFCs) are designated as Class II ozone depleting substances under Section 612 of the Clean Air Act as amended in 1990. Currently, chlorodifluoroethane, HCFC-142b, is considered an acceptable substitute to the use of chlorofluorocarbons (CFCs) for the foam industry under the original Significant New Alternatives Policy (SNAP) rule of March, 1994. However, under the Notice of Proposed Rules Making, Federal Register Volume 65, Number 133 published 11 July, 2000, the EPA is proposing to list chlorodifluoroethane, HCFC-142b, as an unacceptable substitute in all foam end-uses. The EPA withdrew the proposed rule making HCFC-142b, an unacceptable substitute in the July 22, 2002 publication of the Federal Register (volume 67, Number 140, beginning on page 47703).

This proposed ruling is an effort to meet the requirements of the Montreal Protocol, which is an international treaty established in 1987 to reduce the harmful effects of man-made ozone depleting substances. The US adopted the Montreal Protocol and must at a minimum meet the phase out schedule already established for HCFCs which may be summarized as follows:

35% by 2004;

65% by 2010;

90% by 2015;

99.5% by 2020, and,

100% by 2030.

## **BACT Review**

The requirement to conduct a BACT analysis and determination is set forth in section 165(a)(4) of the Clean Air Act (Act), in federal regulations at 40 CFR Part 52.21.(j) and also in OAC rule 3745-31-15(C). The BACT requirement is defined as:

"An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under the Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production or available methods,

systems, and technique, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of best available control technology result in emissions of any pollutant which would exceed the emissions allowed by any applicable standard under 40 CFR Parts 60 and 61. If the Administrator determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of best available control technology. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and shall provide for compliance by means which achieve equivalent results."

The BACT process was further formalized in a memorandum by USEPA on December 1, 1987, by introducing a "top-down" concept for BACT analysis. The top-down process requires that all available control technologies be ranked in descending order of control effectiveness. The BACT process first examines the most stringent - or "top"- alternative. That alternative is established as BACT unless it is demonstrated that technical considerations, or energy, environmental, or economic impacts justify a conclusion that the most stringent technology is not applicable. If the most stringent technology is eliminated, then the next most stringent alternative is considered, and this process is continued until an acceptable BACT is selected.

The objective of the BACT analysis is to conduct pollutant-specific control technology evaluation per USEPA requirements. The BACT evaluation steps consist of:

Step 1: identify all control technologies;

Step 2: eliminate technically infeasible options;

Step 3: ranking remaining control technologies by control effectiveness; and

Step 4: evaluate most effective controls and document results.

Based upon the above discussions, Owens Corning project is subject to PSD regulations which mandates a case-by-case BACT analysis be performed for chlorodifluoroethane, HCFC-142b. The application used a "top-down" approach to determine an appropriate level of control.

For this analysis, the following sources were researched:

- EPA's New Source Review Website;
- USEPA's RACT/BACT/LAER Clearinghouse (RBLC) database;
- Ohio EPA's Best Available Technology (BAT) database;
- California Air Resources Board (CARB) BACT database and accompanying databases maintained by the Bay Area Air Quality Management District and the South Coast Air Quality Management District;
- Texas Natural Research Conservation Commission BACT database;
- Owens Corning and Owens Corning's consultant (EFI) in-house experts;
- Internet search;
- Technical books and articles and communications with control device equipment manufacturers; and

- Guidance documents and communications with state agencies.

### BACT Review

For chlorodifluoroethane, HCFC-142b:

Step 1: identify all control technologies:

- ◆ Oxidation (thermal)
- ◆ Carbon adsorption
- ◆ Carbon adsorption/oxidation
- ◆ Oxidation (catalytic)
- ◆ Absorption (scrubbing)
- ◆ Flare
- ◆ Biofiltration
- ◆ Condensation
- ◆ Alternative blowing agents
- ◆ Best operating practices

Step 2: eliminate technically infeasible options:

Pollutant	Control Technology	Technically Feasible or Not	Comment/Reason for Technical Infeasibility
Chlorodifluoroethane, HCFC-142b	Oxidation (thermal)	No	Inability of heat transfer materials to handle corrosive acid gases.
Chlorodifluoroethane, HCFC-142b	Carbon Adsorption	No	Inability of HCFC (fluorinated compound) to adsorb/desorb on a solid media as a result of high vapor pressure. Full scale technology not proven.
Chlorodifluoroethane, HCFC-142b	Carbon Adsorption /oxidation	Yes	Inability of HCFC (fluorinated compound) to adsorb/desorb on a solid media as a result of high vapor pressure. Full scale technology not proven.
Chlorodifluoroethane, HCFC-142b	Oxidation (catalytic)	No	No catalyst available capable of destroying HCFCs in a corrosive environment (HF and HCl) in the combustion zone for extended duration of operation.
Chlorodifluoroethane, HCFC-142b	Absorption (scrubbing)	No	Low solubility of HCFC and tendency to stay in vapor phase.
Chlorodifluoroethane, HCFC-142b	Flare	No	Inability to maintain elevated combustion zone temperature to destroy HCFC; secondary environmental impacts (i.e., inability to control acid gases).
Chlorodifluoroethane, HCFC-142b	Biofiltration	No	Inability of microbes to dissolve fluorine; HCFC impact on microbial population.
Chlorodifluoroethane, HCFC-142b	Condensation	No	Low pollutant concentration and inability to cool process exhaust stream to temperatures around the boiling point of R-14b(14.5° F) or compress efficiently.

Chlorodifluoroethane, HCFC-142b	Alternative blowing agents	No	No viable proven alternative for process operations at the facility.
Chlorodifluoroethane, HCFC-142b	Best operating practices	Yes	Technically feasible.

A search of the federal RBLC produced 14 facilities and 17 processes between 1/1/1994 and 10/20/2004 using polystyrene foam products manufacturing as a process type operation. A review of that data indicated that 4 of the 17 facilities were potential matches. One of the potential matches was an Owens Corning sister facility located in Illinois. The rest of the other potential matches included two Indiana facilities (one facility that used material substitution for their HCFC pollutant and the other uses thermal incineration for reclaiming operations at 343.8 tons per year of VOC at \$10,3780 per ton removed; and an California facility that operates a direct injection polystyrene operation employing thermal regenerative incineration, but listed no cost effectiveness value.

A review of federal Significant New Alternatives Policy (SNAP) program web page confirmed the material substitution agents listed above. The SNAP program web page did not propose any control of chlorodifluoroethane, HCFC-142b, only material substitution agents.

Step 3: ranking remaining control technologies by control effectiveness:

Pollutant	Control Technology	Control Efficiency
Chlorodifluoroethane, HCFC-142b	Oxidation with Quench (absorption and scrubbing of the acid gases generated during oxidation)	99%
Chlorodifluoroethane, HCFC-142b	Best Operating Procedures	NA

Step 4: evaluate most effective controls and document results:

The only technically feasible option was the combination of thermal oxidation system with a quench, and absorption system to control acid gases generated during the destruction of emissions of chlorodifluoroethane, HCFC-142b.

Step 5: select BACT

A cost effectiveness analysis was done which showed that employing the combination of thermal oxidation system with a quench, and absorption system to control acid gases generated during the destruction of emissions of chlorodifluoroethane, HCFC-142b would not be cost effective. Note, that although it maybe technically feasible to install a waste boiler with thermal incineration the additional cost of waste boiler would render that option as not cost effective.

Therefore, based upon best operating procedures proposed by Owens Corning are considered to be BACT.

### **Secondary Impact**

Federal PSD regulation regulations require that the reviewing authority provide written notification of projects which may affect a Class 1 area. "May effect" is typically interpreted by EPA as a major source or major modification within 100 kilometers.

The closest Class I areas to the Owens Corning Tallmadge facility are the Dolly Sods National Wilderness Area and the Otter Creek National Wilderness Area. Both these wilderness areas are almost 250 km to the southeast and therefore the proposed change will not impact any Class I area.

The proposed modification is not expected to require any additional full-time employees at the Owens Corning Tallmadge facility, or generate an increased demand for commercial or support industries. The proposed change will not require the destruction, relocation, or alternation of any existing residential property. With no associated growth projected, the proposed change will not have any growth-related impacts.

Soils and vegetation are protected by the secondary NAAQS. Since chlorodifluoroethane, HCFC-142b, does not have any NAAQS threshold level, air dispersion modeling analysis can not provide an assurance that chlorodifluoroethane, HCFC-142b, would any impact on soils and vegetation.

In lieu of air dispersion modeling analysis, a literature was performed to evaluate whether or not chlorodifluoroethane, HCFC-142b, would have any significant impact on soils and vegetation. Based upon that literature search, HCFCs are subject to atmospheric degradation which gives rise to several byproducts including trifluoroacetic acid (TFA) that can inhibit plant growth and development at high concentrations. However, chlorodifluoroethane, HCFC-142b, does not form TFA as a byproduct. In addition, recent studies indicate that TFA can be degraded by soil microorganisms. The atmospheric concentrations of all HCFCs, including chlorodifluoroethane, HCFC-142b, are expected to be very small and according to literature no adverse impacts were reported and therefore the proposed change will not have any significant impact on soils and vegetation.

Chlorodifluoroethane, HCFC-142b, has a very high vapor pressure (2,544 mm Hg at 77°C) and exists in the gaseous phase under atmospheric conditions. In addition, chlorodifluoroethane, HCFC-142b, is not expected to form condensation plumes. The emissions of chlorodifluoroethane, HCFC-142b, are not expected to impair visibility.

### Conclusions

Based upon analysis of the permit to install application and it's supporting documentation provided by Owens Corning Tallmadge facility, the Ohio EPA staff has determined that the proposed increase will comply with all applicable State and Federal environmental regulations and that the requirements for BACT are satisfied. Therefore, the Ohio EPA staff recommends that a permit to install be issued to the Owens Corning Tallmadge facility.

PUBLIC NOTICE  
ISSUANCE OF DRAFT PERMIT TO INSTALL  
SUBJECT TO PREVENTION OF SIGNIFICANT DETERIORATION REVIEW  
FOR THE OWENS CORNING TALLMADGE FACILITY

Public Notice is hereby given that the Staff of the Ohio Environmental Protection Agency (EPA) has recommended to the Director that the Ohio EPA issue a draft action of a Permit to Install (PTI) to Owens Corning, Tallmadge, Ohio. The draft action (permit no.16-02379) was issued on November , 2004.

This draft permit proposes to allow the modification of Owens Corning's existing polystyrene foam board extrusion Line #3 and associated equipment. Air emissions of chlorodifluoroethane, HCFC-142b, which is a Class II Ozone Depleting Substance under Title IV of the Clean Air Act will result. The proposed allowable pollutant air emission rate is listed below, in tons per year.

<u>Pollutant</u>	<u>Tons/yr</u>
HCFC-142b	6.44

This facility is subject to the applicable provisions of the Prevention of Significant Deterioration (PSD) regulations as promulgated by U.S. EPA (40 CFR 52.21) and the Ohio EPA permit to install requirements (OAC 3745-31).

Within 30 days from the date of this notice, any interested party may submit comments or request a public hearing. Comments are to be sent to Sean Vadas of the Akron Air Pollution Control, 146 South High Street, Room 904, Akron, Ohio, 44308.

Further information concerning this application, which is available for public inspection, may be secured from Sean Vadas of the Akron Air Pollution Control at the above address during normal business hours. Telephone number: (330) 375-2480.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
SUMMIT COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:

Lazarus Gov. Center

**Application No:** 16-02379

**Fac ID:** 1677120043

**DATE:** 11/23/2004

Owens Corning Tallmadge Facility  
Gary Scotton  
PO Box 37 170 South Ave  
Tallamdge, OH 44278-0037

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$500** will be due. Please do not submit any payment now.

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

Sincerely,

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

CC: USEPA

ARAQMD

Akron Metro. Area Trans. Study

WV

PA

**PUBLIC NOTICE**

**ISSUANCE OF DRAFT PERMIT TO INSTALL 16-02379 FOR AN AIR CONTAMINANT SOURCE FOR  
Owens Corning Tallmadge Facility**

On 11/23/2004 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Owens Corning Tallmadge Facility**, located at **170 South Ave, Tallmadge, Ohio**.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 16-02379:

**Modification to Polystyrene Foam Board Extrusion Line 3(P003), Increase in Production.**

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

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



**Permit To Install  
Terms and Conditions**

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

**DRAFT PERMIT TO INSTALL 16-02379**

Application Number: 16-02379  
Facility ID: 1677120043  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Owens Corning Tallmadge Facility  
Person to Contact: Gary Scotton  
Address: PO Box 37 170 South Ave  
Tallmadge, OH 44278-0037

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**170 South Ave  
Tallmadge, Ohio**

Description of proposed emissions unit(s):  
**Modification to Polystyrene Foam Board Extrusion Line 3(P003), Increase in Production.**

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

**A. State and Federally Enforceable Permit To Install General Terms and Conditions****1. Monitoring and Related Recordkeeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

## 2. Scheduled Maintenance/Malfunction Reporting

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

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

## 3. Risk Management Plans

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

## 4. Title IV Provisions

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

## 5. Severability Clause

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

**6. General Requirements**

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

**7. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

**8. Federal and State Enforceability**

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

**9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally

Owens Corning Tallmadge Facility

Facility ID: 1677120043

PTI Application: 16-02379

**Issued: To be entered upon final issuance**

applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

**10. Permit To Operate Application**

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete

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

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the source(s) covered by this permit.

**11. Best Available Technology**

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

**12. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

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

**1. Compliance Requirements**

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

**2. Reporting Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**3. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**4. Termination of Permit To Install**

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

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

## **5. Construction of New Sources(s)**

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

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

## **6. Public Disclosure**

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

## **7. Applicability**

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

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emissions unit(s).

**8. Construction Compliance Certification**

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

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

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

**C. Permit To Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
OC	6.44

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

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

None

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

None

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

**A. State and Federally Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - Foam Insulation Board Manufacturing - Line 3 Barometric Leg - Modification to replace feedscrew	OAC rule 3745-31-05(A)(3)	The requirements of this rule also includes compliance with the requirements of OAC rules 3745-21-07(G)(2) and 3745-21-(13) thru (20).  Organic compound (OC) emissions shall not exceed 1.47 lbs/hr
	OAC rule 3745-21-07(G)(2)	Exempt, See A.I.2.a below.
	OAC rule 3745-31-(13) thru (20)	The tons per rolling 12-month period shall not exceed 6.44 tpy OC  See A.II.2 below.

**2. Additional Terms and Conditions**

- 2.a The permitted blowing agents (HCFC's) that are employed are exempt from the requirements of OAC rule 3745-21-07(G)(2), pursuant to OAC rule 3745-21-07(G)(9)(f).

**II. Operational Restrictions**

1. 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; and

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- d. 1,1-difluoroethane (HFC-152a) - organic compound.
2. The permittee shall establish operating procedures that will minimize HCFC emissions by maintaining the efficiency of the blowing agent addition and board forming operations.

**III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall evaluate the blowing agent efficiency on a once per shift frequency to ensure the material is being added to meet product specification by performing a "rate check." 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 by other procedures approved by the Akron RAQMD and Ohio EPA.

The permittee shall maintain records of the performance of blowing agent rate checks 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.

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; or
  - c. 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:
  - a. total amount of raw materials consumed, i.e. polystyrene resin + blowing agent + colorant + flame retardant + fillers, in pounds;

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- b. the number of hours of operation; and
- c. the organic compound emission rate, calculated in accordance with the equations in section A.V.1.a below, in pounds per hour (average).

**IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which include an identification of each day during which the average hourly total organic compound emissions exceeded 1.47 pounds per hour, and the actual average hourly organic compound emissions for each such day.
2. The quarterly deviation reports shall be submitted as specified in Part I - General Term and Conditions of this permit.
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 monthly record showing the use of any blowing agent other than HCFC-142b. 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 submit an annual report (this report maybe submitted as confidential) beginning after issuance of the final air permit to install summarizing their efforts to replace blowing agent HCFC-142b or any other blowing agent employed as described in term D.4 above. This report shall contain information pursuant to, but not limited to, the federal Significant New Alternative Policy (SNAP) program and any regulations pertaining to that program, including updates to any pertaining SNAP regulations and correspondence with federal SNAP program officials.

**V. Testing Requirements**

1. Compliance with the emission limitation(s) in Section A.I. of these terms and conditions shall be determined in accordance with the following method(s):
  - a. Emission Limitation:

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Organic compound (OC) emissions shall not exceed 1.47 lbs/hr

Applicable Compliance Method:

Compliance shall be determined in accordance with the following equation:

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

Where:

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

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. Emission Limitation:

The tons per rolling 12-month period shall not exceed 6.44 tpy OC

Applicable Compliance Method:

Compliance with the short term pounds per hour limitation will ensure compliance with the annual emission limitation.

**VI. Miscellaneous Requirements**

None

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**B. State Only Enforceable Section**

**I. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - Foam Insulation Board Manufacturing - Line 3 Barametric Leg - Modification to replace feedscrew	None	None

**2. Additional Terms and Conditions**

2.a None

**II. Operational Restrictions**

None

**III. Monitoring and/or Recordkeeping Requirements**

None

**IV. Reporting Requirements**

None

**V. Testing Requirements**

None

**VI. Miscellaneous Requirements**

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None

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