



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

5/1/2014

Certified Mail

Mr. Edward Puhala
Owens Corning Foam Insulation, LLC
170 South Avenue
Tallmadge, OH 44278-0037

Facility ID: 1677120043
Permit Number: P0115603
County: Summit

RE: DRAFT AIR POLLUTION TITLE V PERMIT
Permit Type: Renewal

Dear Permit Holder:

A draft of the OAC Chapter 3745-77 Title V permit for the referenced facility has been issued. The purpose of this draft is to solicit public comments. A public notice will appear in the Ohio Environmental Protection Agency (EPA) Weekly Review and the local newspaper, Akron Beacon Journal. A copy of the public notice, the Statement of Basis, and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and Akron Regional Air Quality Management District
146 South High Street, Room 904
Akron, OH 44308

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified if a public hearing is scheduled. A decision on processing the Title V permit will be made after consideration of comments received and oral testimony if a public hearing is conducted. You will then be provided with a Preliminary Proposed Title V permit and another opportunity to comment prior to the 45-day Proposed Title V permit submittal to U.S. EPA Region 5. The permit will be issued final after U.S. EPA review is completed and no objections to the final issuance have been received. If you have any questions, please contact Akron Regional Air Quality Management District at (330)375-2480.

Sincerely,

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

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
ARAQMD; Pennsylvania; West Virginia

PUBLIC NOTICE
5/1/2014 Issuance of Draft Air Pollution Title V Permit

Owens Corning Foam Insulation, LLC

170 South Avenue,

Tallmadge, OH 44278

Summit County

FACILITY DESC.: Polystyrene Foam Product Manufacturing

PERMIT #: P0115603

PERMIT TYPE: Renewal

PERMIT DESC: Title V Renewal Permit for Plastic Foam Products Manufacturer.

The Director of the Ohio Environmental Protection Agency issued the draft permit above. The permit and complete instructions for requesting information or submitting comments may be obtained at: <http://epa.ohio.gov/dapc/permitsonline.aspx> by entering the permit # or: Kelly Kanoza, Akron Regional Air Quality Management District, 146 South High Street, Room 904, Akron, OH 44308. Ph: (330)375-2480



Statement of Basis for Air Pollution Title V Permit

Facility ID:	1677120043
Facility Name:	Owens Corning Foam Insulation, LLC
Facility Description:	Plastic Foam Products Manufacturer
Facility Address:	170 South Avenue, Tallmadge, OH 44278
Permit #:	P0115603, Renewal

This facility is subject to Title V because it is major for:

Lead
 Sulfur Dioxide
 Carbon Monoxide
 Volatile Organic Compounds
 Nitrogen Oxides
 Particulate Matter ≤ 10 microns
 Single Hazardous Air Pollutant
 Combined Hazardous Air Pollutants
 Maximum Available Control Technology Standard(s)
 GHG
 Title IV

A. Standard Terms and Conditions

Has each insignificant emissions unit been reviewed to confirm it meets the definition in OAC rule 3745-77-01(U)?	Yes
Were there any "common control" issues associated with this facility? If yes, provide a summary of those issues and explain how the DAPC decided to resolve them.	No
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a minor permit modification per OAC rule 3745-77-08(C)(1)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a significant permit modification per OAC rule 3745-77-08(C)(3)	N/A



Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document that qualify as a reopening per OAC rule 3745-77-08(D)	N/A
Please identify the affected unit(s) and associated PTI, if applicable, along with a brief description of any changes to the permit document resulting from a renewal per OAC rule 3745-77-08(E)	P002, P003, P006, and P007, PTI #P0114713, Issued on 6/6/2013 – Administrative Modification of PTI #P0109178 to incorporate new blowing agents. P013, PTI #P0116651, To be issued concurrently with Title V PTO Renewal – Administrative Modification of PTI #16-02490 to remove actual annual VOC reporting term.
Please identify the affected unit(s) and pollutant(s) for which a Compliance Assurance Monitoring (CAM) Plan is required per 40 CFR 64. Provide more emissions unit specific detail in Section C.	P006, P007, P008, and P012 – Particulate Emissions.

B. Facility-Wide Terms and Conditions

Term and Condition (paragraph)	Basis		Comments
	SIP (3745-)	Other	
1.		Y	Identifying terms that are State-only enforceable.
2.	77-07(A)(13)		Identifying insignificant emissions units that are State and Federally enforceable.
3.	77-07(A)(13)		Identifying insignificant emissions units that are not subject to any applicable requirement or de minimis.

C. Emissions Unit Terms and Conditions

Key: EU = emissions unit ID ND = negative declaration (i.e., term that indicates that a particular rule(s) is (are) not applicable to a specific emissions unit) OR = operational restriction M = monitoring requirements ENF = did noncompliance issues drive the monitoring requirements?	R = record keeping requirements Rp = reporting requirements ET = emission testing requirements (not including compliance method terms) St = streamlining term used to replace a PTI monitoring, record keeping, or reporting requirement with an equivalent or more stringent requirement Misc = miscellaneous requirements
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EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P002	0.39 lb VOC/hr 1.69 tons VOC/yr	31-05(A)(3)	N	Y	Y	Y	N	Y	Y	N	N	N	ND - 3745-31-05(A)(3) is not applicable to OC emissions. OR - List of allowable blowing agents. M,R&Rp specified for OR. M, R &Rp - Process efficiency checks, type and amount of blowing agent, VOC emission rate. CAM plan is not applicable. ET- Compliance demonstrated by calculations.
P002 P006	32.8 tons VOC per rolling, 12 months for P002 & P006, combined	31-05(D)	N	N	Y	Y	N	Y	Y	N	N	N	OR - Maximum 3,240 hours per rolling, 12 months. M,R&Rp specified for OR. M, R &Rp - Hours of operation, VOC emissions. CAM plan is not applicable. ET - Compliance demonstrated by recordkeeping.
P003	N/A	31-05(A)(3)	N	Y	Y	Y	N	Y	Y	N	N	N	ND - 3745-31-05(A)(3) is not applicable to OC emissions. OR - List of allowable blowing agents. M,R&Rp specified for OR. M, R &Rp - Process efficiency checks, type of blowing agent. CAM plan is not applicable. ET - No emissions limitations.
P006	9.74 tons PE/yr	31-05(F)	N	Y	N	Y	N	Y	Y	N	N	Y	ND - Voluntary restriction to avoid BAT. M, R &Rp - Pressure drop operational range. CAM plan is applicable (cyclone, baghouse). ET - Compliance demonstrated by calculations. Misc - CAM plan QA/QC parameters.
P006	7.37 tons fugitive VOC/yr	31-05(D)	N	N	Y	Y	N	Y	Y	N	N	N	OR - List of allowable blowing agents. Maximum 3,240 hours per rolling, 12 months. M,R&Rp specified for OR. M, R &Rp - Hours of operation, VOC emissions. CAM plan is not applicable. ET - Compliance demonstrated by calculation.
P006 P007 P008 P012	20% opacity	17-07(A)(1)	N	N	N	Y	N	Y	Y	N	Y	Y	M, R &Rp - Pressure drop operational range. CAM plan is applicable (cyclone, and/or baghouse). ET - Compliance demonstrated by OAC rule 3745-17-03(B)(1). St - Weekly VE checks and semiannual VE reporting were not in PTI. Misc - CAM plan QA/QC parameters.



EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
P006 P007	5.34 lbs PE/hr	17-11(B)(1)	N	N	N	Y	N	Y	Y	N	N	Y	M, R &Rp - Pressure drop operational range. CAM plan is applicable (cyclone, baghouse). ET - Compliance demonstrated by Methods 1-5 of 40 CFR Part 60, Appendix A. Misc - CAM plan QA/QC parameters.
P007	9.81 tons PE/yr	31-05(F)	N	Y	Y	Y	N	Y	Y	N	N	Y	ND - Voluntary restriction to avoid BAT. OR - List of allowable blowing agents. M,R&Rp specified for OR. M, R &Rp - Pressure drop operational range. CAM plan is applicable (cyclone, baghouse). ET - Compliance demonstrated by calculations. Misc - CAM plan QA/QC parameters.
P008	138.5 lbs OC/hr 608.6 tons OC/yr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculations.
P008	2.5 lbs VOC/hr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculations.
P008	11.04 tons VOC per rolling, 12 months	31-05(D)	N	N	Y	Y	N	Y	Y	N	N	N	OR - Maximum 200,000 lbs of EPS or XPS foam per rolling, 12 months. M,R&Rp specified for OR. M, R &Rp - Monthly amount and type of foam processed, VOC emission rate. CAM plan is not applicable. ET - Compliance demonstrated by recordkeeping.
P008	7.9 tons PM ₁₀ /yr	31-05(F)	N	Y	Y	Y	N	Y	Y	N	N	Y	ND - Voluntary restriction to avoid BAT. OR - Emissions vented to baghouse. M,R&Rp specified for OR. M, R &Rp - Pressure drop operational range. CAM plan is applicable (baghouse). ET - Compliance demonstrated by calculations. Misc - CAM plan QA/QC parameters.
P008	3.82	17-11(B)(1)	N	N	N	Y	N	Y	Y	N	N	Y	M, R &Rp - Pressure drop operational range. CAM plan is applicable



EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
	lbsPE/hr												(baghouse). ET - Compliance demonstrated by OAC rule 3745-17-03(B)(10). Misc - CAM plan QA/QC parameters.
P009	15.6 lbs OC/hr 62.3 tons OC/yr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculation.
P009	1.5 tons VOC per rolling, 12 months	31-05(D)	N	N	Y	Y	N	Y	Y	N	N	N	OR - Maximum 200,000 lbs of EPS or XPS per rolling, 12 months. M,R&Rp specified for OR. M, R &Rp - Monthly amount and type of foam processed, VOC emission rate. CAM plan is not applicable. ET - Compliance demonstrated by recordkeeping.
P010	20.2 lbs OC/hr 80.3 tons OC/yr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculation.
P010	1.9 tons VOC per rolling, 12 months	31-05(D)	N	N	Y	Y	N	Y	Y	N	N	N	OR - Maximum 200,000 lbs of EPS or XPS per rolling, 12 months. M,R&Rp specified for OR. M, R &Rp - Monthly amount and type of foam processed, VOC emission rate. CAM plan is not applicable. ET - Compliance demonstrated by recordkeeping.
P011	N/A	N	N	N	N	N	N	N	N	N	N	N	Fugitive VOC warehouse emissions are listed under P006.
P012	N/A	31-05(A)(3)	N	Y	Y	Y	N	Y	Y	N	N	N	ND - OAC rule 3745-31-05(A)(3), VOC PTE is less than 10 tpy. OR - Only process EPS or XPS foam containing no blowing agent. M,R&Rp specified for OR. M, R &Rp - If anything other than allowable materials employed. CAM plan is not applicable. ET - No emissions limitation.
P012	6.6 tons PM ₁₀ /yr	31-05(F)	N	Y	Y	Y	N	Y	Y	N	N	Y	ND - Voluntary restriction to avoid BAT. OR - Emissions vented to baghouse. M,R&Rp specified for OR.



Statement of Basis
 Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043

EU(s)	Limitation	Basis		ND	OR	M	ENF	R	Rp	ET	St	Misc	Comments
		SIP (3745-)	Other										
													M, R &Rp - Pressure drop operational range. CAM plan is applicable (baghouse). ET - Compliance demonstrated by calculations. Misc - CAM plan QA/QC parameters.
P012	3.4 lbs PE/hr	17-11(B)(1)	N	N	N	Y	N	Y	Y	N	N	Y	M, R &Rp - Pressure drop operational range. CAM plan is applicable (baghouse). ET - Compliance demonstrated by OAC rule 3745-17-03(B)(10). Misc - CAM plan QA/QC parameters.
P013	20.2 lbs OC/hr 88.7 tons OC/yr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculations
P013	3.1 lbs VOC/hr 13.7 tons VOC/yr	31-05(A)(3)	N	N	N	Y	N	Y	N	N	N	N	M & R - Monthly amount and type of foam processed, VOC emission rate. CAM plan is not applicable. Rp - Limits based on PTE. ET - Compliance demonstrated by calculations.



DRAFT

**Division of Air Pollution Control
Title V Permit
for
Owens Corning Foam Insulation, LLC**

Facility ID:	1677120043
Permit Number:	P0115603
Permit Type:	Renewal
Issued:	5/1/2014
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Title V Permit
for
Owens Corning Foam Insulation, LLC

Table of Contents

Authorization	1
A. Standard Terms and Conditions	2
1. Federally Enforceable Standard Terms and Conditions	3
2. Monitoring and Related Record Keeping and Reporting Requirements.....	3
3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance.....	6
4. Risk Management Plans	7
5. Title IV Provisions	7
6. Severability Clause	7
7. General Requirements	7
8. Fees.....	8
9. Marketable Permit Programs.....	8
10. Reasonably Anticipated Operating Scenarios	9
11. Reopening for Cause	9
12. Federal and State Enforceability	9
13. Compliance Requirements	9
14. Permit Shield	11
15. Operational Flexibility.....	11
16. Emergencies	11
17. Off-Permit Changes	12
18. Compliance Method Requirements	12
19. Insignificant Activities or Emissions Levels.....	13
20. Permit to Install Requirement.....	13
21. Air Pollution Nuisance	13
22. Permanent Shutdown of an Emissions Unit	13
23. Title VI Provisions	13
24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only	14
25. Records Retention Requirements Under State Law Only.....	14
26. Inspections and Information Requests	14
27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements.....	15
28. Permit Transfers	15



29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations	15
30. Submitting Documents Required by this Permit	16
B. Facility-Wide Terms and Conditions.....	17
C. Emissions Unit Terms and Conditions	19
1. P002, Barometric Leg #2	20
2. P003, Barometric Leg #3	26
3. P006, Finishing Equipment	29
4. P007, Finishing Equipment	37
5. P008, Nelmor Foam Grinder	43
6. P009, Reclaim #1 Extruder	51
7. P010, Reclaim #2 Extruder	54
8. P011, Staging and Warehouse	57
9. P012, Vortex Foam Grinder	58
10. P013, Reclaim #3 Extruder	65



Draft Title V Permit
Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043
Effective Date: To be entered upon final issuance

Authorization

Facility ID: 1677120043
Facility Description: Plastic Foam Products Manufacturer
Application Number(s): A0048671
Permit Number: P0115603
Permit Description: Title V Renewal Permit for Plastic Foam Products Manufacturer.
Permit Type: Renewal
Issue Date: 5/1/2014
Effective Date: To be entered upon final issuance
Expiration Date: To be entered upon final issuance
Superseded Permit Number: P0109280

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

Owens Corning Foam Insulation, LLC
170 South Avenue
Tallmadge, OH 44278

Ohio Environmental Protection Agency (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 Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Akron Regional Air Quality Management District. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director



Draft Title V Permit
Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043
Effective Date: To be entered upon final issuance

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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
 - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
 - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements
 - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.

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

- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

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



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

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

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

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

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submitted scheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the



probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Akron Regional Air Quality Management District. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

- (3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Akron Regional Air Quality Management District by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of



federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

- (4) Each written report shall be signed by a Responsible Official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

- (5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Akron Regional Air Quality Management District unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))



4. Risk Management Plans

If applicable, the permittee shall develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. ("Act"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

- a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or
- b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

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

5. Title IV Provisions

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

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

6. Severability Clause

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

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

7. General Requirements

- a) 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 except as provided pursuant to A.16 below.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.



- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.
- f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:
 - (1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
 - (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
 - (3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78.

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

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))



10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

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

- a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.
- b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.
- c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.
- d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

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

12. Federal and State Enforceability

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

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

13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible



Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (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 paragraph (E) of OAC rule 3745-77-03.
 - (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.

- c) 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.

- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Akron Regional Air Quality Management District) and the Administrator of the U.S. EPA in the following manner and with the following content:
 - (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
 - (2) Compliance certifications shall include the following:
 - a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.



- b. The permittee's current compliance status.
 - c. Whether compliance was continuous or intermittent consistent with A.13.d.2.a above.
 - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.
 - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

14. Permit Shield

- a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.
- b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

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

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Akron Regional Air Quality Management District with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Akron Regional Air Quality Management District as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.



This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

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

17. Off-Permit Changes

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

- a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.
- b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.
- c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).
- d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.
- e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

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

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

18. Compliance Method Requirements

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

(This term is provided for informational purposes only.)



19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

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

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

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

21. Air Pollution Nuisance

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

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

22. Permanent Shutdown of an Emissions Unit

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

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

Unless otherwise exempted, no emissions unit identified in this permit that has been certified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

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

23. Title VI Provisions

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



- a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.
- b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.
- c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

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

24. Reporting Requirements Related to Monitoring and Record Keeping Requirements Under State Law Only

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the 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 (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Akron Regional Air Quality Management District. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted 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.)

25. Records Retention Requirements Under State Law Only

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.

26. Inspections and Information Requests

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



whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

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

28. 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.

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

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

- a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or
- b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or
- c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.



Draft Title V Permit

Owens Corning Foam Insulation, LLC

Permit Number: P0115603

Facility ID: 1677120043

Effective Date: To be entered upon final issuance

30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Akron Regional Air Quality Management District, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.



Draft Title V Permit
Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043
Effective Date: To be entered upon final issuance

B. Facility-Wide Terms and Conditions



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.

2. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emissions limitations and/or control requirements contained within the identified permit-to-install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit-to-install or in the SIP approved versions of OAC Chapters 3745-17, 3745-18, 3745-21, and 3745-31:

:

EU ID Operations, Property and/or Equipment Description

T002 Tank Unloading Station #3

T003 Tank Unloading Station #1

[Authority for term: OAC rule 3745-77-07(A)(13)]

3. The following insignificant emissions units located at this facility are exempt from permit requirements because they are not subject to any applicable requirement (as defined in OAC rule 3745-77-01(H)) or because they meet the "de minimis" criteria established in OAC rule 3745-15-05:

EU ID Operations, Property and/or Equipment Description

B001 Space Heaters

F001 Paved Roadways and Parking Areas

L001 Solvent Parts Washer

P014 Barometric Leg #4

P016 Hot Wire Cutter #1

P021 Dry Materials Blender

P022 House Vacuum System

P023 Electric Oven

P024 Cooling Towers

P025 Line 2 Laminator

P027 Printer #2

P028 Printer #3

P029 T2 Kiwi Printers

P030 T3 Kiwi Printers

T004 One Ton Tank Unloading Station #1

T005 10-ton Praxair CO₂ Tank

[Authority for term: OAC rule 3745-77-07(A)(13)]



Draft Title V Permit
Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043
Effective Date: To be entered upon final issuance

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 operation(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 are identified below. 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) (PTI #P0114713, Issued 6/6/2013)	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. See b)(2)a.
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid Nonattainment New Source Review	VOC emissions from emissions units P002 and P006, combined, shall not exceed 32.8 tons per rolling, 12-month period. See c)(1)

(2) Additional Terms and Conditions

a. 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]



c) Operational Restrictions

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall only employ the following blowing agents in this emissions unit:
- a. 1,1,1,2-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 that may or may not contain VOC;
 - g. 1,1,2,2-tetrafluoroethane (HFC-134) - organic compound; and
 - h. Other blowing agents approved by the approved by the Akron Regional Air Quality Management District (ARAQMD) and Ohio EPA.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

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, in accordance with one of the following methods:
- a. 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;
 - b. 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
 - c. other procedures approved by ARAQMD 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.



[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (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;
 - 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. other procedures approved by ARAQMD 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (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).

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (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; and
 - b. the rolling, 12-month summation of the operating hours, when a blowing agent that contains any VOC is employed.



[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

- (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.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports which include the following:
 - a. an identification of each day during which the average hourly VOC emissions exceeded 0.39 pound per hour, and the actual average hourly VOC emissions for each such day;
 - b. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P002 and P006, combined; and
 - c. all exceedances of the rolling, 12-month restriction on the numbers of hours of operation.

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

[Authority for term: OAC rule 3745-31-05(A)(3)&(D) and OAC rule 3745-77-07(A)(3)]

- (2) 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (3) 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)(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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emissions Limitations:

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

Applicable Compliance Methods:

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

Hourly VOC rate (lbs/hr) = SUM (M) x EF x P_{VOC} for each product recipe

Where:

M = actual raw material in-feed rate factoring in buoyancy factor entering extruder, in pounds per hour

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

P_{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 identified above shall be determined by multiplying the hourly allowable VOC emission limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be demonstrated.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

VOC emissions from emissions units P002 and P006, combined, shall not exceed 32.8 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation identified above shall be demonstrated by the record keeping requirements specified in section d)(5) of this permit.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]



Draft Title V Permit
Owens Corning Foam Insulation, LLC
Permit Number: P0115603
Facility ID: 1677120043
Effective Date: To be entered upon final issuance

- g) Miscellaneous Requirements
 - (1) None.



2. P003, Barometric Leg #3

Operations, Property and/or Equipment Description:

Polystyrene foam board extrusion, 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 operation(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 are identified below. 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) (PTI #P0114713, Issued 6/6/2013)	See b)(2)a.

(2) Additional Terms and Conditions

a. 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

c) Operational Restrictions

(1) The permittee shall employ only the following blowing agents in this emissions unit:

- a. 1,1,1,2-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. 1,1,2,2-tetrafluoroethane (HFC-134) - organic compound;
- g. US EPA SNAP approved blowing agents that do not contain VOC; and
- h. Other blowing agents approved by the approved by the Akron Regional Air Quality Management District (ARAQMD) and Ohio EPA.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

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, in accordance with one of the following methods:

- a. 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;
- b. 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
- c. other procedures approved by ARAQMD 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

(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. other procedures approved by ARAQMD 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (3) The permittee shall maintain a record of each blowing agent employed in this emissions unit on a daily basis.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

- (1) 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (2) 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) 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.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:
 - a. None.

g) Miscellaneous Requirements

- (1) None.



3. P006, Finishing Equipment

Operations, Property and/or Equipment Description:

Polystyrene foam board trimming and cutting 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 operation(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 are identified below. 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(F) (PTI #P0114713, Issued 6/6/2013) Voluntary Restriction to avoid BAT	Particulate emissions (PE) shall not exceed 9.74 tons/yr. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid Nonattainment New Source Review	Volatile organic compound (VOC) emissions from emissions units P002 and P006, combined, shall not exceed 32.8 tons per rolling, 12-month period. See c)(1) Fugitive VOC emissions from the warehouse shall not exceed 7.37 tons/yr.
c.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 5.34 lbs/hr.
e.	40 CFR Part 64.1-64.10 Compliance Assurance Monitoring	See b)(2)b., d)(1) through (6), e)(1) and (2), and g)(1).

(2) Additional Terms and Conditions

a. Permit to Install (PTI) P0114713 for this air contaminant source takes into account the use of a cyclone and 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 Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

- b. The PE from this emissions unit shall be vented to a cyclone and baghouse at all times the emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(1) and 40 CFR Part 64]

c) **Operational Restrictions**

- (1) 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 VOC blowing agents.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall only finish foam board containing the following blowing agents in this emissions unit:

- a. 1,1,1,2-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 that may or may not contain VOC;
- g. 1,1,2,2-tetrafluoroethane (HFC-134) - organic compound; and
- h. Other blowing agents approved by the approved by the Akron Regional Air Quality Management District (ARAQMD) and Ohio EPA.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

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 is 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).



[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) Whenever the monitored value for the pressure drop deviates from the limit or range established in d(4) of 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (3) 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 d)(4) of 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]



- (4) The acceptable pressure drop 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. 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (5) The permittee shall maintain an operational maintenance log for the baghouse which documents the following:
- a. daily records of the pressure drop across the baghouse;
 - b. dates and findings of any baghouse inspections and maintenance activities performed on the baghouse; and
 - c. calibration dates and maintenance activities performed on the pressure drop monitoring equipment.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (6) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible PE from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]



- (7) 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; and
 - b. the rolling, 12-month summation of the operating hours, when finishing foam boards containing any VOC blowing agents.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

- (8) 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.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

- (9) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the baghouse controlling this emissions unit are the static pressure drop across the baghouse, which was established in accordance with the manufacturer's recommendations, and VE observations. When the static pressure drop shows operation outside the indicator range(s), the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in e)(1) below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse shall not be configured to have bypass capability

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

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:
- 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.

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

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) by January 31 and July 31 of each year and shall cover the previous six-month periods.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (3) The permittee shall submit quarterly deviation (excursion) reports which include the following:
 - a. all exceedances of the rolling, 12-month VOC emission limitation for emissions units P002 and P006, combined; and
 - b. all exceedances of the rolling, 12-month restriction on the numbers of hours of operation.

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

PE shall not exceed 9.74 tons/yr

Applicable Compliance Method:

Compliance with the annual allowable PE limitation identified above shall be demonstrated by multiplying the maximum hourly controlled PE rate [(148.25 lbs PE/hr) x (1-0.985) = 2.22 lbs PE/hr] by the maximum annual hours of operation (8760 hrs/yr) and dividing by 2000 lbs/ton.



[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

VOC emissions from emissions units P002 and P006, combined, shall not exceed 32.8 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation identified above shall be demonstrated by the record keeping requirements specified in section d)(6) of this permit.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

Fugitive VOC emissions from the warehouse shall not exceed 7.37 tons/yr

Applicable Compliance Method:

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

$$\text{Annual VOC rate (tons/yr)} = \text{SUM} (M \times \text{Trim}\%) \text{EF}_2 \times P_{\text{mix}} \times 3240 \text{ hrs}/2000 \text{ lbs}$$

Where:

SUM = summation of each VOC in the blowing agent mix

M = actual raw material in-feed rate factoring in buoyancy factor entering extruder, in pounds per hour

Trim% = percentage of material removed from board stock

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

P_{Mix} = concentration VOC blend/BA% content of in-feed

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance with the allowable stack opacity limitation identified above shall be determined through visible emissions observations performed in accordance with US EPA Method 9 of 40 CFR Part 60, Appendix A.



[Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1)]

e. Emission Limitation:

PE shall not exceed 5.34 lbs/hr

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation identified above shall be determined through emissions testing performed in accordance with US EPA Methods 1-5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) The permittee shall ensure the following QA/QC parameters are achieved as part of the facility's Compliance Assurance Monitoring (CAM) Plan:

- a. personnel completing the visible emissions checks will routinely familiarize themselves with the procedures and criteria established in US EPA approved test methods (Method 9 and Method 22);
- b. pressure gauges and pressure monitoring equipment will be calibrated at least once per year; and
- c. periodic internal fabric filter baghouse inspections and associated baghouse maintenance will be performed at least once per year.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]



4. P007, Finishing Equipment

Operations, Property and/or Equipment Description:

Polystyrene foam board trimming and cutting equipment associated with Line 3

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 operation(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 are identified below. 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(F) (PTI #P0114713, Issued 6/6/2013) Voluntary Restriction to avoid BAT	Particulate emissions (PE) shall not exceed 9.81 tons/yr. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-17-07(A)(1)	Visible PE from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
c.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 5.34 lbs/hr.
d.	40 CFR Part 64.1-64.10 Compliance Assurance Monitoring	See b)(2)b., d)(1) through (6), e)(1) and (2), and g)(1).

(2) Additional Terms and Conditions

a. Permit to Install (PTI) P0114713 for this air contaminant source takes into account the use of a cyclone and 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 Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

b. The PE from this emissions unit shall be vented to a cyclone and baghouse at all times the emissions unit is in operation.



[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(1), and 40 CFR Part 64]

c) Operational Restrictions

- (1) The permittee shall only finish foam board containing the following blowing agents in this emissions unit:
 - a. 1,1,1,2-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. 1,1,2,2-tetrafluoroethane (HFC-134) - organic compound;
 - g. US EPA SNAP approved blowing agents that do not contain VOC; and
 - h. Other blowing agents approved by the approved by the Akron Regional Air Quality Management District (ARAQMD) and Ohio EPA.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

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 is 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).

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) Whenever the monitored value for the pressure drop deviates from the limit or range established in d)(4) of 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (3) 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 d)(4) of 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (4) The acceptable pressure drop 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. 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (5) The permittee shall maintain an operational maintenance log for the baghouse which documents the following:
 - a. daily records of the pressure drop across the baghouse;



- b. dates and findings of any baghouse inspections and maintenance activities performed on the baghouse; and
- c. calibration dates and maintenance activities performed on the pressure drop monitoring equipment.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (6) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (7) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the baghouse controlling this emissions unit are the static pressure drop across the baghouse, which was established in accordance with the manufacturer's recommendations, and VE observations. When the static pressure drop shows operation outside the indicator range(s), the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in e)(1) below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse shall not be configured to have bypass capability.

[Authority for term: OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

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:
 - 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.

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

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) by January 31 and July 31 of each year and shall cover the previous six-month periods.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

PE shall not exceed 9.81 tons/yr

Applicable Compliance Method:

Compliance with the annual allowable PE limitation identified above shall be demonstrated by multiplying the maximum hourly controlled PE rate [(160.0 lbs PE/hr) x (1-0.986) = 2.24 lbs PE/hr] by the maximum annual hours of operation (8760 hrs/yr) and dividing by 2000 lbs/ton.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(C)(1)]

- b. Emission Limitation:

Visible PE from any stack shall not exceed 20% opacity, as a 6-minute average



Applicable Compliance Method:

If required, compliance with the allowable stack opacity limitation identified above shall be determined through visible emissions observations performed in accordance with US EPA Method 9 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

PE shall not exceed 5.34 lbs/hr

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation identified above shall be determined through emissions testing performed in accordance with US EPA Methods 1-5 of 40 CFR Part 60, Appendix A.

[Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1)]

g) **Miscellaneous Requirements**

- (1) The permittee shall ensure the following QA/QC parameters are achieved as part of the facility's Compliance Assurance Monitoring (CAM) Plan:
 - a. personnel completing the visible emissions checks will routinely familiarize themselves with the procedures and criteria established in US EPA approved test methods (Method 9 and Method 22);
 - b. pressure gauges and pressure monitoring equipment will be calibrated at least once per year; and
 - c. periodic internal fabric filter baghouse inspections and associated baghouse maintenance will be performed at least once per year.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]



5. P008, Nelmor Foam Grinder

Operations, Property and/or Equipment Description:

Scrap foam grinder for EPS, XPS, and R&D foam

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 operation(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 are identified below. 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) (PTI #16-02490, Issued 11/15/2007)	Organic compound (OC) emissions shall not exceed 138.5 lbs/hr and 608.6 tons/yr. Volatile organic compound (VOC) emissions shall not exceed 2.5lbs/hr.
b.	OAC rule 3745-31-05(D)	VOC emissions shall not exceed 11.04 tons per rolling, 12-month period. See c)(1)
c.	OAC rule 3745-31-05(F) (PTI #16-02490, Issued 11/15/2007) Voluntary Restriction to avoid BAT	Particulate matter less than 10 microns (PM ₁₀) emissions shall not exceed 7.9 tons/yr. See b)(2)a.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
e.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 3.82 lbs/hr.
f.	40 CFR Part 64.1-64.10 Compliance Assurance Monitoring	See c)(2), d)(1) through (6), e)(1) and (2), and g)(1).

(2) Additional Terms and Conditions

a. Permit to Install (PTI) 16-02490 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in



operation, with a minimum control efficiency of 98%, by weight for PM₁₀, as a voluntary restriction as proposed by the permittee for the purpose of avoiding Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3).

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

c) Operational Restrictions

- (1) The maximum annual polystyrene usage shall not exceed 200,000 pounds of R&D scrap expanded polystyrene (EPS) or R&D extruded polystyrene (XPS) foam based on a rolling, 12-month summation of the polystyrene foam throughput.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall operate the baghouse installed on this emissions unit, in accordance with the manufacturer's specifications, instructions and operating manual(s), with modification deemed necessary by the permittee, at all times while the emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(1), and 40 CFR Part 64]

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).

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) Whenever the monitored value for the pressure drop deviates from the limit or range specified in d(4) of 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.



[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (3) 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 d)(4) of 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (4) The acceptable pressure drop range across the baghouse is 0.1 to 5.0 inches of water.

This specified 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. 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (5) The permittee shall maintain an operational maintenance log for the baghouse which documents the following:
- a. daily records of the pressure drop across the baghouse;



- b. dates and findings of any baghouse inspections and maintenance activities performed on the baghouse; and
- c. calibration dates and maintenance activities performed on the pressure drop monitoring equipment.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (6) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (7) The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the total amount of scrap EPS foam processed, including R&D EPS, in pounds;
 - b. the total amount of scrap XPS foam processed, including R&D XPS, in pounds;
 - c. the rolling, 12-month total amount of EPS foam processed, including R&D EPS, in pounds;
 - d. the rolling, 12-month total amount of XPS foam processed, including R&D XPS, in pounds;
 - e. the calculated VOC emission rate, in tons, as calculated using the actual emission factors developed by the permittee for each type of XPS foam processed in the grinder (actual emission factor varies depending on type of XPS foam ground and the VOC content of each type of XPS foam); and
 - f. the calculated, rolling, 12-month VOC emission rate, in tons.

[Authority for term: OAC rule 3745-31-05(A)(3)&(D) and OAC rule 3745-77-07(A)(3)]



- (8) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(3)]

- (9) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the baghouse controlling this emissions unit are the static pressure drop across the baghouse, which was established in accordance with the manufacturer's recommendations, and VE observations. When the static pressure drop shows operation outside the indicator range(s), the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in e)(1) below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

e) Reporting Requirements

- (1) The permittee shall submit quarterly 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 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. where a prompt investigation was not conducted;
 - c. an identification of each incident of deviation described in e)(1)a. 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. where proper records were not maintained for the investigation and/or the corrective action(s).

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

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) by January 31 and July 31 of each year and shall cover the previous six-month periods.



[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the annual material usage restriction of 200,000 pounds of R&D scrap EPS or R&D extruded XPS)foam; and
 - b. all exceedances of the rolling, 12-month VOC emission limitation of 11.04 tons.

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

OC emissions shall not exceed 138.5 lbs/hr and 608.6 tons/yr

Applicable Compliance Methods:

Compliance with the hourly allowable OC emission limitation identified above shall be demonstrated by multiplying the maximum hourly polystyrene usage rate by the appropriate OC emission factor*.

Compliance with the annual allowable OC emission limitation identified above shall be determined by multiplying the hourly allowable OC emission limitation by 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be demonstrated.

*Emission Factors:

Extruded Polystyrene foam XPS, including R&D XPS = 0.0176 lb OC per pound of polystyrene**

Expanded polystyrene EPS, including R&D EPS = 0.0014 lb OC per pound of polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]



b. Emission Limitation:

VOC emissions shall not exceed 2.5lbs/hr

Applicable Compliance Method:

Compliance with the hourly allowable VOC emission limitation identified above shall be demonstrated by multiplying the maximum hourly usage rate by the appropriate VOC emission factor*.

*Emission Factors:

Expanded polystyrene EPS, including R&D EPS = 0.0014 lb VOC per pound of polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

VOC emissions shall not exceed 11.04 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation identified above shall be demonstrated by the recordkeeping requirements specified in d)(7).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

d. Emission Limitation:

PM₁₀ shall not exceed 7.9 tons/yr

Applicable Compliance Method:

Compliance with the annual allowable PM₁₀ emission limitation identified above shall be demonstrated by multiplying the maximum hourly uncontrolled PE rate [(1,800 pounds/hr) by (1 - 0.95*) and by (1-.98*)]. The result is multiplied by the maximum annual number of hours of operation (8,760 hours/yr), and divided by 2,000 lbs/ton.

*The capture efficiency is assumed to be 95% and the control efficiency is assumed to be 98%.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(C)(1)]



e. Emission Limitation:

Visible PE shall not exceed 20% opacity as a six-minute average

Applicable Compliance Method:

If required, compliance with the allowable opacity limitation identified above shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1)]

f. Emission Limitation:

PE shall not exceed 3.82 lbs/hr

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation identified above shall be determined based on the results of stack testing conducted in accordance with OAC rule 3745-17-03(B)(10).

[Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) The permittee shall ensure the following QA/QC parameters are achieved as part of the facility's Compliance Assurance Monitoring (CAM) Plan:

- a. personnel completing the visible emissions checks will routinely familiarize themselves with the procedures and criteria established in US EPA approved test methods (Method 9 and Method 22);
- b. pressure gauges and pressure monitoring equipment will be calibrated at least once per year; and
- c. periodic internal fabric filter baghouse inspections and associated baghouse maintenance will be performed at least once per year.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]



6. P009, Reclaim #1 Extruder

Operations, Property and/or Equipment Description:

Reclaim Unit No. 1 - Polystyrene Extruder

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 operation(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 are identified below. 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) (PTI #16-02490, Issued 11/15/2007)	Organic compound (OC) emissions shall not exceed 15.6 lbs/hr and 62.3 tons/yr.
b.	OAC rule 3745-31-05(D)	Volatile organic compound (VOC) emissions shall not exceed 1.5 tons per rolling, 12-month period.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The maximum annual polystyrene usage shall not exceed 200,000 pounds of R&D scrap expanded polystyrene (EPS) or R&D extruded polystyrene (XPS) foam based on a rolling, 12-month summation of the polystyrene foam throughput.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the amount of polystyrene used for each category (R&D EPS scrap foam, scrap expanded foam EPS), in pounds;

b. the amount of extruded polystyrene (XPS), including R&D XPS used, in pounds;



- c. the rolling, 12-month total amount of polystyrene used for each category (R&D EPS scrap foam, scrap expanded foam EPS), in pounds;
- d. the VOC emission rate, in tons, calculated using the actual emission factors developed by the permittee for each type of XPS foam processed in the extruder (actual emission factor varies depending on type of XPS foam and the VOC content of each type of XPS foam); and
- e. the calculated, rolling, 12-month VOC emission rate, in tons.

[Authority for term: OAC rule 3745-31-05(A)(3)&(D) and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the annual material usage restriction of 200,000 pounds of R&D scrap EPS or R&D XPS foam based; and
 - b. all exceedances of the rolling, 12-month VOC emission limitation of 1.5 tons.

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

OC emissions shall not exceed 15.6 lbs/hr and 62.3 tons/yr

Applicable Compliance Methods:

Compliance with the hourly allowable OC emission limitation identified above shall be demonstrated by multiplying the maximum hourly polystyrene usage rate by the appropriate OC emission factor*.

Compliance with the annual allowable OC emission limitation identified above shall be determined by multiplying the hourly allowable OC emission limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

* Emission Factors:



R&D scrap EPS polystyrene = 0.0016 lb OC per pound of polystyrene**

Scrap EPS polystyrene = 0.0002 lb OC per pound of polystyrene**

XPS ground foam and R&D XPS foam = 0.0142 lb OC per pound of polystyrene**

Reclaim XPS foam = 0.0053 lb OC per lb polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

VOC emissions shall not exceed 1.5 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation identified above shall be demonstrated by the record keeping requirements specified in d)(1).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.



7. P010, Reclaim #2 Extruder

Operations, Property and/or Equipment Description:

Reclaim Unit No.2 Polystyrene Extruder

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 operation(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 are identified below. 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) (PTI #16-02490, Issued 11/15/2007)	Organic compound (OC) emissions shall not exceed 20.2 lbs/hr and 80.3 tons/yr.
b.	OAC rule 3745-31-05(D)	Volatile organic compound (VOC) emissions shall not exceed 1.9 tons per rolling, 12-month period.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) The maximum annual polystyrene usage shall not exceed 200,000 pounds of R&D scrap expanded polystyrene (EPS) or R&D extruded polystyrene (XPS) foam based on a rolling 12-month summation of the polystyrene foam throughput.

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the amount of polystyrene used for each category (R&D EPS scrap foam, scrap expanded foam EPS), in pounds;

b. the amount of extruded polystyrene (XPS), including R&D XPS used, in pounds;



- c. the rolling, 12-month total amount of polystyrene used for each category (R&D EPS scrap foam, scrap expanded foam EPS), in pounds;
- d. the VOC emission rate, in tons, calculated using the actual emission factors developed by the permittee for each type of XPS foam processed in the extruder (actual emission factor varies depending on type of XPS foam and the VOC content of each type of XPS foam); and
- e. the calculated, rolling, 12-month VOC emission rate, in tons.

[Authority for term: OAC rule 3745-31-05(A)(3)&(D) and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the annual material usage restriction of 200,000 pounds of R&D scrap EPS or R&D XPS foam based; and
 - b. all exceedances of the rolling, 12-month VOC emission limitation of 1.9 tons.

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

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(A)(3)]

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

OC emissions shall not exceed 20.2 lbs/hr and 80.3 tons/yr

Applicable Compliance Methods:

Compliance with the hourly allowable OC emission limitation identified above shall be demonstrated by multiplying the maximum hourly polystyrene usage rate by the appropriate OC emission factor*.

Compliance with the annual allowable OC emission limitation identified above shall be determined by multiplying the hourly allowable OC emission limitation by 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be assumed.

*Emission Factors:



R&D scrap EPS polystyrene = 0.0016 lb OC per pound of polystyrene**

Scrap EPS polystyrene = 0.0002 lb OC per pound of polystyrene**

XPS ground foam and R&D XPS foam = 0.0142 lb OC per pound of polystyrene**

Reclaim XPS foam = 0.0053 lb OC per lb polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

VOC emissions shall not exceed 1.9 tons per rolling, 12-month period

Applicable Compliance Method:

Compliance with the annual allowable VOC emission limitation identified above shall be demonstrated by the recordkeeping requirements specified in d)(1).

[Authority for term: OAC rule 3745-31-05(D) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.



8. P011, Staging and Warehouse

Operations, Property and/or Equipment Description:

Warehouse storage of foam board prior to shipping. Fugitive blowing agent emissions.

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 operation(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 are identified below. 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.	None	None

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.



9. P012, Vortex Foam Grinder

Operations, Property and/or Equipment Description:

Scrap polystyrene foam grinder

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 operation(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 are identified below. 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) (PTI #P0109177, Issued 12/22/2011)	See b)(2)a.
b.	OAC rule 3745-31-05(F) (PTI #P0109177, Issued 12/22/2011) Voluntary Restriction to avoid BAT	Particulate matter emissions less than 10 microns (PM ₁₀) shall not exceed 6.6 tons/yr. See b)(2)b.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-11(B)(1)	PE shall not exceed 3.4 lbs/hr.
e.	40 CFR Part 64.1-64.10 Compliance Assurance Monitoring	See c)(2), d)(1) through (6), e)(1) and (2), and g)(1).

(2) Additional Terms and Conditions

a. Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the volatile organic compound (VOC) emissions from this air contaminant source since the uncontrolled potential to emit for VOC is less than 10 tons per year.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

b. Permit to Install (PTI) P0109177 for this air contaminant source takes into account the use of a baghouse system, whenever this air contaminant source is in operation, with a minimum control efficiency of 98%, 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) for particulate emissions.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(1)]

c) Operational Restrictions

- (1) The permittee shall grind only scrap expanded polystyrene (EPS) foam, or scrap extruded polystyrene (XPS) foam containing no detectable amount of blowing agent, in this emission unit.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(1)]

- (2) The permittee shall operate the baghouse installed on this emissions unit, in accordance with the manufacturer's specifications, instructions, and operating manual(s), with modification deemed necessary by the permittee, at all times while the emissions unit is in operation.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(1), and 40 CFR Part 64]

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 during operation of this emissions unit, including periods of startup and shutdown. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop on a daily basis.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) Whenever the monitored value for the pressure drop deviates from the range specified in d)(4) of 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;
- c. the date(s) the investigation was conducted;
- d. the names of the personnel who conducted the investigation; and
- e. the findings and recommendations of the investigation.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]



- (3) 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 d)(4) of 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 the 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; and
 - f. the names of the personnel who performed the work.

Investigation and records required by this permit 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.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (4) Except for an initial operating period after filter media replacement to attain design filtering efficiency, the acceptable range for the pressure drop across the baghouse is 0.1 to 5.0 inches of water.

The specified 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 pressure drop range based upon information obtained during future particulate emission tests that demonstrate compliance with the allowable particulate emission rate for this emissions unit. In addition, approved revisions to the pressure drop range will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of administrative modification.

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (5) The permittee shall maintain an operational maintenance log for the baghouse which documents the following:
- a. daily records of the pressure drop across the baghouse;
 - b. dates and findings of any baghouse inspections and maintenance activities performed on the baghouse; and



- c. calibration dates and maintenance activities performed on the pressure drop monitoring equipment.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (6) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and
 - e. any corrective actions taken to eliminate the visible emissions.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (7) The permittee shall maintain records documenting any time periods when the emissions unit was in operation and the baghouse was not operating.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(3)]

- (8) The permittee shall maintain records documenting any time periods when the permittee was grinding anything other than scrap EPS foam, or scrap XPS foam containing no detectable amount of blowing agent, in this emission unit.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

- (9) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the baghouse controlling this emissions unit are the static pressure drop across the baghouse, which was established in accordance with the manufacturer's recommendations, and VE observations. When the static pressure drop shows operation outside the indicator range(s), the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions, and shall comply with the reporting requirements specified in e)(1) below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The baghouse shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]



e) Reporting Requirements

- (1) The permittee shall submit quarterly 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 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. where a prompt investigation was not conducted;
 - c. an identification of each incident of deviation described in e)(1)a. 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. where proper records were not maintained for the investigation and/or the corrective action(s).

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

[Authority for term: OAC rule 3745-31-05(F), OAC rule 3745-77-07(A)(3), and 40 CFR Part 64]

- (2) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to minimize or eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) by January 31 and July 31 of each year and shall cover the previous six-month periods.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]

- (3) The permittee shall submit deviation (excursion) reports that identify any time periods when the emissions unit was in operation and the baghouse was not operating. Each report shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(A)(3)]

- (4) The permittee shall submit deviation (excursion) reports that identify any time periods when the permittee was grinding anything other than scrap EPS foam, or scrap extruded polystyrene (XPS) foam containing no detectable amount of blowing agent, in this emission unit. Each report shall be submitted to the Director (the appropriate Ohio EPA District Office or Local Air Agency) within 30 days after the deviation occurs.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]



f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

PM₁₀ shall not exceed 6.6 ton/yr

Applicable Compliance Method:

Compliance with the annual allowable PM₁₀ emission limitation identified above shall be demonstrated by multiplying the maximum hourly uncontrolled PE rate [(1,500 pounds/hr) by (1 - 0.95*) and by (1-.98*)]. The result is multiplied by the maximum annual number of hours of operation (8,760 hours/yr), and divided by 2,000 lbs/ton.

*The capture efficiency is assumed to be 95% and the control efficiency is assumed to be 98%.

[Authority for term: OAC rule 3745-31-05(F) and OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity as a six-minute average

Applicable Compliance Method:

If required, compliance with the allowable opacity limitation identified above shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-17-03(B)(1) and OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

PE shall not exceed 3.4 lbs/hr

Applicable Compliance Method:

If required, compliance with the hourly allowable PE limitation identified above shall be determine based on the results of stack testing conducted in accordance with OAC rule 3745-17-03(B)(10).

[Authority for term: OAC rule 3745-17-03(B)(10) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) The permittee shall ensure the following QA/QC parameters are achieved as part of the facility's Compliance Assurance Monitoring (CAM) Plan:



Draft Title V Permit

Owens Corning Foam Insulation, LLC

Permit Number: P0115603

Facility ID: 1677120043

Effective Date: To be entered upon final issuance

- a. personnel completing the visible emissions checks will routinely familiarize themselves with the procedures and criteria established in US EPA approved test methods (Method 9 and Method 22);
- b. pressure gauges and pressure monitoring equipment will be calibrated at least once per year; and
- c. periodic internal fabric filter baghouse inspections and associated baghouse maintenance will be performed at least once per year.

[Authority for term: OAC rule 3745-77-07(A)(3) and 40 CFR Part 64]



10. P013, Reclaim #3 Extruder

Operations, Property and/or Equipment Description:

Reclaim No. 3 Polystyrene Extruder

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 operation(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 are identified below. 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) (PTI #P0116651, issued 4/16/2014)	Organic compound (OC) emissions shall not exceed 20.2 lbs/hr and 88.7 tons/yr. Volatile organic compound (VOC) emissions shall not exceed 3.1 lbs/hr and 13.7 tons/yr.

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information for this emissions unit:

a. the amount of polystyrene used for each category (R&D EPS scrap foam, scrap expanded foam EPS), in pounds;

b. the amount of extruded polystyrene (XPS), including R&D XPS used, in pounds;

c. the VOC emission rate, in tons, calculated using the actual emission factors developed by the permittee for each type of XPS foam processed in the extruder



(actual emission factor varies depending on type of XPS foam and the VOC content of each type of XPS foam); and

- d. the year-to-date VOC emissions, in tons.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(A)(3)]

e) Reporting Requirements

- (1) None.

f) Testing Requirements

- (1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitations:

OC emissions shall not exceed 20.2 lbs/hr and 88.7 tons/yr

Applicable Compliance Methods:

Compliance with the hourly allowable OC emission limitation identified above shall be demonstrated by multiplying the maximum hourly polystyrene usage rate by the appropriate OC emission factor*.

Compliance with the annual allowable OC emission limitation identified above shall be determined by multiplying the hourly allowable OC emission limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be demonstrated.

* Emission Factors:

R&D scrap EPS polystyrene = 0.0016 lb OC per pound of polystyrene**

Scrap EPS polystyrene = 0.0002 lb OC per pound of polystyrene**

XPS ground foam and R&D XPS foam = 0.0142 lb OC per pound of polystyrene**

Reclaim XPS foam = 0.0053 lb OC per lb polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]



b. Emission Limitations:

VOC emissions shall not exceed 3.1 lbs/hr and 13.7 tons/yr

Applicable Compliance Methods:

Compliance with the hourly allowable VOC emission limitation identified above shall be demonstrated by multiplying the maximum hourly polystyrene usage rate by the appropriate VOC emission factor*.

Compliance with the annual allowable VOC emission limitation identified above shall be determined by multiplying the hourly allowable VOC emission limitation by 8,760 hrs/yr and dividing by 2,000 lbs/ton. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual allowable emission limitation shall be demonstrated. Compliance may also be demonstrated by the recordkeeping requirements specified in d)(1).

*Emission Factors:

R&D scrap EPS polystyrene = 0.0016 lb VOC per pound of polystyrene**

Scrap EPS polystyrene = 0.0002 lb VOC per pound of polystyrene**

**The emission factors were provided by the permittee and are based on analytical sampling that was performed on various batches of polystyrene scrap foam.

[Authority for term: OAC rule 3745-31-05(A)(3) and OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.