



Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

12/28/2011

Douglas Dean
Third Dimension, Inc.
633 Pleasant Ave
Geneva, OH 44041

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0204030449
Permit Number: P0108761
Permit Type: Initial Installation
County: Ashtabula

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install and Operate (PTIO) for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Star Beacon. A copy of the public notice 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 "Issued Air Pollution Control Permits" link. 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
122 South Front Street
Columbus, Ohio 43215

and Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087

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 in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Northeast District Office at (330)425-9171.

Sincerely,

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

Cc: U.S. EPA Region 5 Via E-Mail Notification
Ohio EPA-NEDO; Pennsylvania; Canada

Certified Mail

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)



Permit Strategy Write-Up

- 1. Check all that apply: X Synthetic Minor Determination Netting Determination
2. Source (Project) Description: Installation of proposed (P006) Mold press no. 6 for EPS foam and EPS/EPE foam products with product aging.
3. Facility Emissions and Attainment Status: The plant makes moldedexpandable polystyrene (EPS) foam and polystyrene/polyethylene (EPS/EPE) foam products. Facility classification is Federally Enforceable Permit to Install/Operate (FEPTIO). Without restrictions emissions from P001-P005 would exceed 100 tons VOC/yr. The current restrictions that allow the Geneva plant to maintain synthetic minor status are:
a. Only pre-puff resin that is processed at on-site pre-expansion lines (P001 or P002) may be molded and is limited to 1,980,000 pounds per rolling 12-months;
b. The blowing agent (pentane) content of each resin employed shall not exceed 10% by weight; and
c. The combined OC (VOC) emissions from current operations (P001-P005) shall not exceed 94.1 tons/rolling 12-months.

Table with 2 columns: Emissions Unit(s) and Potential VOC Emissions, tons/year. Rows include P001 - P005 (94.1), (no OEPA EU ID -> B001) 8.369 mmBtu/hr natural gas boiler (0.2), and P001 - P005 + boiler (94.3).

The facility is located in the city of Geneva, in Ashtabula County, which has an undesignated status with the 2008 federal 8-hr ozone standard of 0.075 ppm; attainment with the 1997 8-hr ozone standard of 0.08 ppm and the 1-hour ozone standard of 0.12 ppm. It is undesignated with the NAAQS one-hour NOx standard of 100 ppb. Portions of Ashtabula County are in non-attainment with the annual 15.0 ug/m3 standard for PM2.5, particulate matter which has a diameter of 2.5 micrometers but in attainment with the 24-hour 35.0 ug/m3 standard for PM2.5. Ashtabula County is in attainment with the lead standards. The entire State of Ohio is in attainment with the carbon monoxide standards.

- 4. Source (Project) Emissions: The unrestricted, potential VOC/OC emissions are comprised of pentane and are estimated to be 45.5 lbs/hr and 199.3 tons/year. The recommended Ohio BAT limit per OAC rule 3745-31-05(A)(3) will be 45.5 lbs/hr of OC emissions, based on the potential rates. In accordance with OAC rule 3745-31-05(D)(1)b a voluntary restriction of 92 tons VOC per rolling 12-months is recommended to limit potential emissions to less than 100 tons VOC/year at P006 so that the project will not be subject to federal attainment New Source Review. The federally enforceable practical restriction is no more than 4044 operating hours per rolling 12-month period:

45.5 lbs VOC/hr x 4044 hrs/rolling 12-months x ton VOC/2000 lbs VOC = 92 tons VOC/rolling 12-months.



- 5. Conclusion: The applicant has proposed no changes to the current restrictions to limit VOC emissions. The combined OC (VOC) emissions from production operations (P001-P006) shall not exceed 94.1 tons/rolling 12-months.

Table with 2 columns: Emissions Unit(s), Potential VOC Emissions, tons/year. Rows include P001 - P006 (94.1), (no OEPA EU ID (no OEPA EU ID -> B001)) 8.369 mmBtu/hr natural gas boiler (0.2), and P001 - P006 + boiler (94.3).

The proposed restrictions to limit VOC emissions at P001-P006 to 94.1 tons/year will ensure that the facility does not emit at major source levels of 100 tons VOC/year or more. The facility will retain synthetic minor status and not be subject to Title V requirements or future New Source Review.

- 6. Please provide additional notes or comments as necessary: None
7. Total Permit Allowable Emissions Summary (for informational purposes only):

Summary table with 2 columns: Pollutant, Tons Per Year. Row: OC, 92.

PUBLIC NOTICE

12/28/2011 Issuance of Draft Air Pollution Permit-To-Install and Operate

Third Dimension, Inc.

633 Pleasant Ave,

Geneva, OH 44041

Ashtabula County

FACILITY DESC.: All Other Basic Organic Chemical Manufacturing

PERMIT #: P0108761

PERMIT TYPE: Initial Installation

PERMIT DESC: Mold press no. 6 for molded expandable polystyrene (EPS) foam and polystyrene/polyethylene (EPS/EPE) foam products.

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/permitonline.aspx> by entering the permit # or: Christine McPhee, Ohio EPA DAPC, Northeast District Office, 2110 East Aurora Road, Twinsburg, OH 44087. Ph: (330)425-9171

Ohio

**Environmental
Protection Agency**

DRAFT

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Third Dimension, Inc.**

Facility ID:	0204030449
Permit Number:	P0108761
Permit Type:	Initial Installation
Issued:	12/28/2011
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install and Operate
for
Third Dimension, Inc.

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Authorization

Facility ID: 0204030449

Application Number(s): A0039873

Permit Number: P0108761

Permit Description: Mold press no. 6 for molded expandable polystyrene (EPS) foam and polystyrene/polyethylene (EPS/EPE) foam products.

Permit Type: Initial Installation

Permit Fee: \$200.00 *DO NOT send payment at this time, subject to change before final issuance*

Issue Date: 12/28/2011

Effective Date: To be entered upon final issuance

Expiration Date: To be entered upon final issuance

Permit Evaluation Report (PER) Annual Date: To be entered upon final issuance

This document constitutes issuance to:

Third Dimension, Inc.
633 Pleasant Ave
Geneva, OH 44041

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

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

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director



Authorization (continued)

Permit Number: P0108761

Permit Description: Mold press no. 6 for molded expandable polystyrene (EPS) foam and polystyrene/polyethylene (EPS/EPE) foam products.

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

Emissions Unit ID:	P006
Company Equipment ID:	Mold press no. 6
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is



very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as being permanently shut down without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

¹Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - (1) None.
 - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - (1) B.2.a), B.4.a), B.4.b) and B.4.c)
2. Federally Enforceable Permit to Install and Operate P0108761 for this air contaminant source takes into account the following voluntary restriction, regarding the emissions units specified in 3., as proposed by the permittee for the purpose of avoiding Title V requirements under OAC rules 3745-77-02 through 3745-77-10:
 - a) The emissions of volatile organic compounds (VOCs) from the emissions units specified in B.3, shall not exceed 94.1 tons/year, based on a rolling, 12-month summation, and shall be achieved by employing the operational restrictions specified in B.4 within this permit for emissions units P001 through P006.
3. Voluntary restrictions to limit potential facility-wide emissions of VOCs by material usage restrictions, concern the following emissions units:
 - a) P001 - Pre-expansion line No. 1 with pre-puff aging for expandable polystyrene (EPS) and expandable polyethylene/polystyrene (EPE/EPS) foam products;
 - b) P002 - Pre-expansion line No. 2 with pre-puff aging for expandable polystyrene (EPS) and expandable polyethylene/polystyrene (EPE/EPS) foam products;
 - c) P003 - Molding machines Nos. 2 and 3 for expandable polystyrene foam and polystyrene/polyethylene foam products with product aging;
 - d) P004 - Molding machine No. 4 for expandable polystyrene foam and polystyrene/polyethylene foam products with product aging;
 - e) P005 - Molding machine No. 5 for expandable polystyrene foam and polystyrene/polyethylene foam products with product aging; and
 - f) P006 - Molding machine No. 6 for expandable polystyrene foam and polystyrene/polyethylene foam products with product aging.
4. Operational Restrictions
 - a) Only pre-puff resin that is processed at an on-site pre-expansion line (P001 or P002) may be molded at any of the mold machine nos. 2 - 6 (P003 – P006).



- b) The maximum annual resin materials usage for the pre-expansion lines (P001 and P002) shall not exceed 1,980,000 pounds, combined, based upon a rolling, 12-month summation of the materials usage rates.
- c) The blowing agent (pentane) content of each resin employed shall not exceed 10%, by weight.

5. Monitoring and/or Record Keeping Requirements

- a) The permittee shall maintain monthly records of the following information for the emissions units identified in B.3.a) and B.3.b):
 - (1) the total monthly resin usage at each pre-expansion emissions unit, in lbs/month;
 - (2) the combined total monthly resin usage at all operations identified in B.3.a) and B.3.b), in lbs/month; and
 - (3) the combined rolling, 12-month summation of total resin usage at all operations identified in B.3.a) and B.3.b), in tons/year.
- b) The permittee shall maintain monthly records of the following information for the emissions units identified in B.3.a) through B.3.f):
 - (1) the total monthly VOC emissions from the use of all pre-puff materials employed at each emissions unit, in tons/month;
 - (2) the combined total monthly VOC emissions from all operations identified in B.3.a) through B.3.f), in tons/month; and
 - (3) the combined rolling, 12-month summation of total VOC emissions from all operations identified in B.3.a) through B.3.f), in tons/year.

6. Reporting Requirements

- a) The permittee shall submit quarterly deviation (excursion) reports for the following emissions unit(s) that identify:
 - (1) all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

<u>Emissions Unit ID(s)</u>	<u>Term & Condition</u>
P001 and P002	B.2.a), B.4.b) and B.4.c)
P003 through P006	B.2.a), B.4.a) and B.4.c)

- (2) the probable cause of each deviation (excursion);



- (3) any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- (4) the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the Northeast District Office).

7. Testing Requirements

- a) Compliance with the emission limitation specified in B.2.a) of these terms and conditions shall be determined in accordance with the following method:

- (1) Emission Limitation:

The emissions of VOC from the emissions units specified in B.3 shall not exceed 94.1 tons/year, based on a rolling, 12-month summation, and shall be achieved within this permit for emissions units P001 through P006.

Applicable Compliance Method:

Compliance shall be demonstrated by employing the operational restrictions specified in B.4 and the record keeping requirements specified in B.5.a) and B.5.b).

8. Miscellaneous Requirements

- a) None.

C. Emissions Unit Terms and Conditions



1. P006, P006

Operations, Property and/or Equipment Description:

Molding machine No. 6 for expandable polystyrene foam and polystyrene/polyethylene foam products with product aging

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. (d)(3).

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. 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) as effective 11/30/2001	The organic compound (OC) emissions shall not exceed 45.5 lbs/hr.
b.	OAC rule 3745-31-05(D)(1)(b) - voluntary restrictions to avoid Title V requirements	The volatile organic compound (VOC) emissions shall not exceed 92 tons/year, based upon a rolling, 12-month summation. See b)(2)a, b)(2)b and g)(1).
c.	OAC rule 3745-31-05(D)(1)(b) - voluntary restrictions to avoid Title V requirements	See B.2. through B.7.

(2) Additional Terms and Conditions

a. To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the emission levels specified in the following table:



Month(s)	Maximum Allowable Cumulative Emissions of VOCs (Tons)
1	7.67
1-2	15.3
1-3	23.0
1-4	30.7
1-5	38.4
1-6	46.0
1-7	53.7
1-8	61.4
1-9	69.0
1-10	76.7
1-11	84.4
1-12	92.0

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual emission limitation for VOCs shall be based upon a rolling, 12-month summation of the daily emissions in accordance with the record keeping requirements specified in d)(1)f; see g)(1).

- b. The maximum annual operating hours for this emissions unit shall not exceed 4044, based upon a rolling, 12-month summation of the operating hours.

To ensure enforceability during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall not exceed the operating hours levels specified in the following table:



Month(s)	Maximum Allowable Cumulative Operating Hours
1	337
1-2	674
1-3	1011
1-4	1348
1-5	1685
1-6	2022
1-7	2359
1-8	2696
1-9	3033
1-10	3370
1-11	3707
1-12	4044

After the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, compliance with the annual emission limitation for operating hours shall be based upon a rolling, 12-month summation of the daily, actual number of hours this emissions unit was in operation in accordance with the record keeping requirements specified in d)(1)g.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each day for this emissions unit:

- a. the name and company identification of each pre-puff material employed;
- b. an identification of the on-site expansion line (i. e. P001 or P002) where the pre-puff material was processed;
- c. an identification of each pre-puff material composition as expandable polystyrene (EPS) or expandable polyethylene/polystyrene (EPE/EPS);
- d. the net weight of each pre-puff material employed, in pounds per day;

- e. for each pre-puff material, the initial blowing agent (pentane) content of the original resin material employed, in percent by weight;
 - f. the total daily OC emissions from the use of all pre-puff materials employed, in pounds per day;
 - g. the actual number of hours this emissions unit was in operation, in hours per day; and
 - h. the average, hourly OC emissions rate, i.e., (f)/(g), in pounds per hour (average).
- (2) The permittee shall maintain monthly records of the following information:
- a. the VOC emissions rate for each month of operations; see g)(1);
 - b. beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the VOC emissions;
 - c. during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative VOC emissions for each calendar month;
 - d. the operating hours for each month;

beginning after the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the rolling, 12-month summation of the operating hours; and

during the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, the permittee shall record the cumulative operating hours for each calendar month.
- (3) Modeling to demonstrate compliance with, the Toxic Air Contaminant Statute, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit(s) maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit-to-install and operate (PTIO) prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTIO.
- e) Reporting Requirements
- (1) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be completed electronically and submitted via the Ohio EPA eBusiness Center: Air Services by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than 12-months for each air contaminant source identified in this permit.

The permittee shall identify in the annual permit evaluation report the following information during the 12-month reporting period for this emissions unit:

- a. each day during which the average hourly OC emissions rate exceeded 45.5 lbs/hr, and the actual, average hourly OC emissions rate;
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).
- (2) The permittee shall submit quarterly deviation (excursion) reports for the emissions unit that identify the following information:
- a. all exceedances of the rolling, 12-month emissions limitation for VOCs and, for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative emission levels;
 - b. all exceedances of the rolling, 12-month limitation on the hours of operation for this emissions unit; and for the first 12 calendar months of operation or the first 12 calendar months following the issuance of this permit, all exceedances of the maximum allowable cumulative hours of operation;
 - c. the probable cause of each deviation (excursion);
 - d. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - e. the magnitude and duration of each deviation (excursion).

Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

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:

The OC emissions shall not exceed 45.5 lbs/hr for each day that any materials are employed at this emissions unit.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1)h. Determination of the daily OC emissions may be based on the following equation:

$$EOC = [\text{summation of } (W_i_PPFi \times P_i) \text{ from } i = 1 \text{ to } i = n] \times EF$$

where:

EOC = the daily, OC emissions for all pre-puff materials from the molding operation and the product aging operation, in pounds per day;

W_i_PPFi = the net weight of resin "i" employed, in pounds per day;

i = an identifier denoting an individual pre-puff material;

n = the total number of different pre-puff materials employed throughout the day;

P_i = the initial blowing agent (pentane) content of the original resin "i" employed; and

EF = an emissions factor for OC emissions from the EPS molding operation and the EPS product aging operation, combined, which is 0.35 lb OC per pound of available pentane content, derived from the factors of 0.25 lb OC per pound of available pentane content, and 0.10 lb OC per pound of available pentane content, respectively, as noted on page 11 of "Expandable Polystyrene Storage and Handling Safety Guide", by Nova Chemicals, an EPS resin manufacturer; or

EF = emissions factor for OC emissions from the EPS/EPE molding operation and the EPS/EP product aging operation, combined, which is 0.25 lb OC per pound of available pentane content, derived from the factors of 0.20 lb OC per pound of available pentane content, and 0.05 lb OC per pound of available pentane content, respectively, as noted in "% of VOCs Lost During Processing Arcel", by Nova Chemicals. "Arcel" is a brand name for EPS/EPE resin manufactured by Nova Chemicals.

If required, the permittee shall demonstrate compliance with this emissions

limitation through emission tests performed in accordance with 40 CFR Part 60,

Appendix A, Method 25A, Method 25 or Method 18, as appropriate, or an

equivalent alternate method as approved by Ohio EPA.

b. Emission Limitation:

The VOC emissions shall not exceed 92 tons/year based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(2)b and d)(2)c, which include the maintenance of a rolling, 12-month summation of the specified emissions.

- (2) Any determination of initial blowing agent (pentane) content (percent by weight) or density of a resin material shall be based on the material as employed at the pre-expansion line (P001 or P002). The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).
- g) Miscellaneous Requirements
- (1) The OC emissions are comprised of pentane, which is also a VOC as defined in OAC rule 3745-21-01(B)(16).