5/6/2014

Certified Mail

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

Jarrod Perkins
PFB Manufaturing, LLC
2725 HENKLE DR.
Lebanon, OH 45036

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 1483060393
Permit Number: P0115883
Permit Type: Renewal
County: Warren

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to “Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General’s Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF 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.

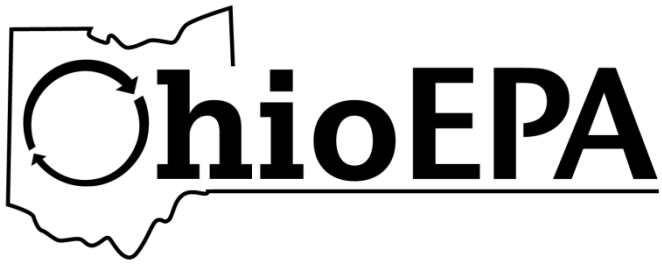
If you have any questions, please contact Southwest Ohio Air Quality Agency at (513)946-7777or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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

Cc: SWOAQA



FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
PFB Manufaturing, LLC

Facility ID:	1483060393
Permit Number:	P0115883
Permit Type:	Renewal
Issued:	5/6/2014
Effective:	5/6/2014
Expiration:	5/6/2019

Division of Air Pollution Control
Permit-to-Install and Operate
for
PFB Manufaturing, LLC

Table of Contents

Authorization

Facility ID:	1483060393
Application Number(s):	A0048618
Permit Number:	P0115883
Permit Description:	FEPTIO renewal permit for an expanded polystyrene (EPS) foam products production facility.
Permit Type:	Renewal
Permit Fee:	$0.00
Issue Date:	5/6/2014
Effective Date:	5/6/2014
Expiration Date:	5/6/2019

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

PFB Manufaturing, LLC
2725 HenkleDr
Lebanon, OH 45036

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

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Southwest Ohio Air Quality Agency
250 William Howard Taft Rd.
Cincinnati, OH 45219
(513)946-7777

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

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0115883
Permit Description: FEPTIO renewal permit for an expanded polystyrene (EPS) foam products production facility.

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

Emissions Unit ID:	**P001**
Company Equipment ID:	OPBOX-01
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	EXP-01
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P005**
Company Equipment ID:	SB-01*SB-16
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	VAC-01
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P008**
Company Equipment ID:	SHP-01*SHP-06
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P009**
Company Equipment ID:	DRFL-01
Superseded Permit Number:	14-05540
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P012**
Company Equipment ID:	CTL-01
Superseded Permit Number:	14-05540
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. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. 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 of this permit 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 [DO/LAA] 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 submitting 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 emission 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 beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

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) None.

C. Emissions Unit Terms and Conditions

1. P001, OPBOX-01

Operations, Property and/or Equipment Description:

Block and shape EPS process - 9000 pounds/hr opening raw material boxes (EPS beads) OPBOX-01, fugitive emissions

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. b)(1)b., b)(2)b., c)(1), d)(2), e)(2) and f)(1)b.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 6.21 pounds per hour. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC.	Emissions of VOC from this emissions unit shall not exceed 5.00 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emission limitation is based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limitation.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for this emissions unit shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) The permittee shall maintain monthly records of the following information for emissions unit P001:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

fugitive emissions from building:

[pentane loss from emissions unit P001 (0.00069 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d(2)a. (pounds of EPS beads/month) x Ton/2000 pounds] = Tons of VOC/month; and,

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

fugitive emissions from building:

[pentane loss from emissions unit P001 (0.00069 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d)(2)b. (pounds of EPS beads/rolling, 12-month period) x Ton/2000 pounds] = Tons of VOC/rolling, 12-month period.

(3) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC

rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation; and,

iii. allexceedances of the rolling, 12-month VOC emission limitation.

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 6.21 pounds per hour.

Applicable Compliance Method:

If required, compliance with the short-term VOC emission limitation shall be demonstrated by multiplying the actual EPS usage rate in OPBOX-01 (pounds of EPS/hour) by the pentane Emission Factor (pound of pentane emissions/pound of EPS) as outlined in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006.

The pentane Emission Factor shall be calculated by multiplying the actual pentane content of the EPS raw material in OPBOX-01 (pound of pentane/pound of EPS) by the amount of pentane emitted in OPBOX-01 (pound of pentane emissions/pound of pentane).

The short-term VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

9000 pounds of EPS/hour x 0.00069 pound of VOC/pound of EPS = 6.21 pounds of VOC per hour.

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.069 pound of pentane, Opening Boxes/pound of EPS x 0.01 pound of pentane emissions, lost (VOC)/pound of pentane, Opening Boxes = 0.00069 pound of VOC/pound of EPS.

b. Emission Limitation:

Emissions of VOC from this emissions unit shall not exceed 5.00 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(2)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.00069 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 5.00 TPY of VOC.

g) Miscellaneous Requirements

(1) None.

2. P002, EXP-01

Operations, Property and/or Equipment Description:

Block and shape EPS process - 7000 pounds/hr batch expander EXP-01 and associated fluid bed drying with Regenerative Thermal Oxidizer (RTO-01) fugitive emissions

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)(5).

(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. b)(1)b., b)(2)b., b)(2)c., c)(1), d)(1) thru d)(4), e)(2) and f)(1)c.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 7.62 pounds per hour and the combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007 and P008) shall not exceed 14.49 pounds per hour. Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 15.06 pounds per hour. See b)(2)b. and b)(2)c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from the RTO stack and fugitive emissions, combined, for this emissions unit shall not exceed 23.49 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emission limitations are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limitations.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c. The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for this emissions unit shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizer, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of three years.

(4) The permittee shall maintain monthly records of the following information for emissions unit P002:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

emissions from RTO stack:

[pentane loss from emissions unit P002 (0.02391 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x Capture Efficiency (%/100) x (1 - RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

fugitive emissions from building:

[pentane loss from emissions unit P002 (0.02391 pound pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

emissions from RTO stack:

[pentane loss from emissions unit P002 (0.02391 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x Capture Efficiency (%/100) x (1 – RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period; and

fugitive emissions from building:

[pentane loss from emissions unit P002 (0.02391 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period.

(5) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation;

iii. all exceedances of the rolling, 12-month VOC emissions limitation;

iv. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

v. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

vi. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s).

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 7.62 pounds per hour.

The combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, and P008) shall not exceed 14.49 pounds per hour.

The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

Applicable Compliance Method:

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

i. The emission testing shall be conducted within 6 months prior to the expiration of this FEPTIO;

ii. The emission testing shall be conducted to demonstrate compliance with the combined allowable mass emission rates for VOC and the destruction efficiency requirements for VOC;

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Method 25 or Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services. The test methods which must be employed to demonstrate compliance with the Capture Efficiency and control efficiency requirements for organic compounds are specified below;

iv. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services; and

v. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95, or another approved alternative. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total

concentration, and on a consideration of the potential presence of interfering gases.

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

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

7000 pounds of EPS/hour x 0.02391 pound of VOC/pound of EPS = 167.37 pounds of VOC per hour, uncontrolled; and

167.37 pounds of VOC/hour x (0.91 CaE) x (1 – 0.95 CE) = 7.62 pounds of VOC/hour, RTO stack.

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.069 pound of pentane, Opening Boxes – 0.00069 pound of pentane lost in OPBOX-01 = 0.06831 pound of pentane, Expander

0.06831 pound of pentane, Expander/pound of EPS x 0.35 pound of pentane emissions, lost (VOC)/pound of pentane, Expander = 0.02391 pound of VOC/pound of EPS.

CaE = Capture Efficiency; CE = Control Efficiency (RTO destruction efficiency)

b. Emission Limitation:

Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 15.06 pounds per hour.

Applicable Compliance Method:

If required, compliance with the fugitive VOC emission limitation may be demonstrated by test methodology including, but not limited to, Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M. The permittee may request to use an alternative method or procedure for the determination of Capture Efficiency in accordance with the USEPA' s "Guidelines for Determining Capture Efficiency," dated January 9, 1995.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

7000 pounds of EPS/hour x 0.02391 pound of VOC/pound of EPS = 167.37 pounds of VOC per hour, uncontrolled.

167.37 pounds VOC/hour x (1 – 0.91 CaE) = 15.06 pounds VOC/hour, fugitive.

c. Emission Limitation:

Emissions of VOC from the RTO stack and fugitive emissions, combined, for this emissions unit shall not exceed 23.49 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(4)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.02391 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 173.35 TPY of VOC, uncontrolled.

173.35 TPY of VOC x (1 – 0.91 CaE) = 15.60 TPY of VOC, fugitive

173.35 TPY of VOC x (0.91 CaE) x (1 – 0.95 CE) = 7.89 TPY of VOC, RTO stack

15.60 TPY + 7.89 TPY = 23.49 TPY of VOC.

g) Miscellaneous Requirements

(1) None.

3. P005, SB-01*SB-16

Operations, Property and/or Equipment Description:

Block and shape EPS process - 8600 pounds/hr batch storage (aging) bags SB-01 through SB-16 with Regenerative Thermal Oxidizer (RTO-01) fugitive emissions

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)(5).

(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. b)(1)b., b)(2)b., b)(2)c., c)(1), d)(1) thru d)(4), e)(2), and f)(1)c.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 5.21 pounds per hour and the combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, and P008) shall not exceed 14.49 pounds per hour. Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 10.31 pounds per hour. See b)(2)b. and b)(2)c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from the RTO stack and fugitive emissions, combined, for this emissions unit shall not exceed 13.09 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emission limitations are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limitations.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c. The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for this emissions unit shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the

thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizer, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of three years.

(4) The permittee shall maintain monthly records of the following information for emissions unit P005:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

emissions from RTO stack:

[pentane loss from emissions unit P005 (0.01332 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x Capture Efficiency (%/100) x (1 - RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

fugitive emissions from building:

[pentane loss from emissions unit P005 (0.01332 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

emissions from RTO stack:

[pentane loss from emissions unit P005 (0.01332 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x Capture Efficiency (%/100) x (1 – RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period; and

fugitive emissions from building:

[pentane loss from emissions unit P005 (0.01332 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period.

(5) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation;

iii. all exceedances of the rolling, 12-month VOC emissions limitation;

iv. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

v. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

vi. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s).

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 5.21 pounds per hour.

The combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, and P008) shall not exceed 14.49 pounds per hour.

The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

Applicable Compliance Method:

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

i. The emission testing shall be conducted within 6 months prior to the expiration of this FEPTIO;

ii. The emission testing shall be conducted to demonstrate compliance with the combined allowable mass emission rates for VOC and the destruction efficiency requirements for VOC;

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Method 25 or Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services. The test methods which must be employed to demonstrate compliance with the Capture Efficiency and control efficiency requirements for organic compounds are specified below;

iv. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services; and

v. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95, or another approved alternative.

The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

8600 pounds of EPS/hour x 0.01332 pound of VOC/pound EPS = 114.55 pounds of VOC per hour, uncontrolled

114.55 pounds of VOC/hour x (0.91 CaE) x (1 – 0.95 CE) = 5.21 pounds of VOC/hour, RTO stack

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.06831 pound of pentane, Expander – 0.02391 pound of pentane lost in EXP-01 = 0.0444 pound pentane, Aging Bags

0.0444 pound of pentane, Aging Bags/pound EPS x 0.30 pound of pentane emissions, lost (VOC)/pound of pentane, Aging Bags = 0.01332 pound of VOC/pound EPS.

CaE = Capture Efficiency; CE = Control Efficiency (RTO destruction efficiency)

b. Emission Limitation:

Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 10.31 pounds per hour.

Applicable Compliance Method:

If required, compliance with the fugitive VOC emission limitation may be demonstrated by test methodology including, but not limited to, Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M. The permittee may request to use an alternative method or procedure for the determination of Capture Efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

8600 pounds of EPS/hour x 0.01332 pound of VOC/pound EPS = 114.55 pounds of VOC per hour, uncontrolled

114.55 pounds of VOC/hour x (1 – 0.91 CaE) = 10.31 pounds of VOC/hour, fugitive

c. Emission Limitation:

Emissions of VOC from the RTO stack and fugitive emissions, combined, for this emissions unit shall not exceed 13.09 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(4)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.01332 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 96.57 TPY of VOC, uncontrolled

96.57 TPY of VOC x (1 – 0.91 CaE) = 8.692 TPY of VOC, fugitive

96.57 TPY of VOC x (0.91 CaE) x (1 – 0.95 CE) = 4.394 TPY of VOC, RTO stack

8.692 TPY + 4.394 TPY = 13.086 TPY, rounded to 13.09 TPY of VOC.

g) Miscellaneous Requirements

(1) None.

4. P007, VAC-01

Operations, Property and/or Equipment Description:

Block and shape EPS process - 6000 pounds/hr vacuum block mold press VAC-01 with Regenerative Thermal Oxidizer (RTO-01) fugitive emissions

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)(5).

(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. b)(1)b., b)(2)b., b)(2)c., c)(1), d)(1) thru d)(4), e)(2) and f)(1)c.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 1.36 pounds per hour and the combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, and P008) shall not exceed 14.49 pounds per hour. Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 2.68 pounds per hour. See b)(2)b. thru b(2)c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from the RTO stack and fugitive emissions, combined, for emissions units P007 and P008, combined, shall not exceed 4.88 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emission limitations are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limitations.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c. The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for emissions units P007 and P008, combined, shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizer, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of three years.

(4) The permittee shall maintain monthly records of the following information for emissions units P007 & P008, combined:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

emissions from RTO stack:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x Capture Efficiency (%/100) x (1 - RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

fugitive emissions from building:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

emissions from RTO stack:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x Capture Efficiency (%/100) x (1 – RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period; and

fugitive emissions from building:

[pentane loss from emissions units P007 & P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period.

(5) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation;

iii. all exceedances of the rolling, 12-month VOC emissions limitation;

iv. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

v. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

vi. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s).

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 1.36 pounds per hour.

The combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007 and P008) shall not exceed 14.49 pounds per hour.

The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

Applicable Compliance Method:

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

i. The emission testing shall be conducted within 6 months prior to the expiration of this FEPTIO;

ii. The emission testing shall be conducted to demonstrate compliance with the combined allowable mass emission rates for VOC and the destruction efficiency requirements for VOC;

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Method 25 or Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services. The test methods which must be employed to demonstrate compliance with the Capture Efficiency and control efficiency requirements for organic compounds are specified below;

iv. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services; and

v. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95, or another approved alternative. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total

concentration, and on a consideration of the potential presence of interfering gases.

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

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

6000 pounds of EPS/hour x 0.00497 pound of VOC/pound EPS = 29.82 pounds of VOC per hour, uncontrolled

29.82 pounds of VOC/hour x (0.91 CaE) x (1 – 0.95 CE) = 1.36 pounds of VOC/hour, RTO stack

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.0444 pound of pentane, Aging Bags – 0.01332 pound of pentane lost in SB01 – SB-16 = 0.03108 pound of pentane, Molding Presses

0.03108 pound of pentane, Molding Presses/pound EPS x 0.16 pound of pentane emissions, lost (VOC)/pound of pentane, Molding Presses = 0.00497 pound of VOC/pound of EPS.

CaE = Capture Efficiency; CE = Control Efficiency (RTO destruction efficiency)

b. Emission Limitation:

Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 2.68 pounds per hour.

Applicable Compliance Method:

If required, compliance with the fugitive VOC emission limitation may be demonstrated by test methodology including, but not limited to, Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M. The permittee may request to use an alternative method or procedure for the determination of Capture Efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency" dated January 9, 1995.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

6000 pounds of EPS/hour x 0.00497 pound of VOC/pound of EPS = 29.82 pounds of VOC per hour, uncontrolled.

29.82 pounds of VOC/hour x (1 – 0.91 CaE) = 2.68 pounds of VOC/hour, fugitive

c. Emission Limitation:

Emissions of VOC from the RTO stack and fugitive emissions, combined, for emissions units P007 and P008, combined, shall not exceed 4.88 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(4)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.00497 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 36.03 TPY of VOC, uncontrolled.

36.03 TPY of VOC x (1 – 0.91 CaE) = 3.243 TPY of VOC, fugitive

36.03 TPY of VOC x (0.91 CaE) x (1 – 0.95 CE) = 1.639 TPY of VOC, RTO stack

3.243 TPY + 1.639 TPY = 4.882 TPY, rounded to 4.88 TPY VOC.

g) Miscellaneous Requirements

(1) None.

5. P008, SHP-01*SHP-06

Operations, Property and/or Equipment Description:

Block and shape EPS process - 1320 pounds/hr shape mold presses SHP-01 through SHP-06 with Regenerative Thermal Oxidizer (RTO-01) fugitive emissions

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)(5).

(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. b)(1)b., b)(2)b., b)(2)c., c)(1), d)(1) thru d)(4), e)(2) and f)(1)c.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 0.30 pound per hour and the combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, and P008) shall not exceed 14.49 pounds per hour. Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 0.59 pound per hour. See b)(2)b. and b)(2)c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from the RTO stack and fugitive emissions, combined, for emissions units P007 and P008, combined, shall not exceed 4.88 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emissions limitations are based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limitations.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c. The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for emissions units P007 and P008, combined, shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

(3) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the

thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log or record of the operating time for the capture (collection) system, thermal oxidizer, monitoring equipment, and the associated emissions unit(s).

These records shall be maintained at the facility for a period of three years.

(4) The permittee shall maintain monthly records of the following information for emissions units P007 and P008, combined:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

emissions from RTO stack:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x Capture Efficiency (%/100) x (1 - RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

fugitive emissions from building:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)a. (pounds of EPS beads/month) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of OC (pentane)/month; and

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

emissions from RTO stack:

[pentane loss from emissions units P007 and P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x Capture Efficiency (%/100) x (1 – RTO destruction efficiency documented during last compliant stack test (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period; and

fugitive emissions from building:

[pentane loss from emissions units P007 & P008, combined (0.00497 pound of pentane/pound of EPS beads) x the actual EPS bead usage rate from d)(4)b. (pounds of EPS beads/rolling, 12-month period) x (1 - Capture Efficiency (%)/100) x Ton/2000 pounds] = Tons of (pentane)/rolling, 12-month period.

(5) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation;

iii. all exceedances of the rolling, 12-month VOC emissions limitation;

iv. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature maintained during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

v. any records of downtime (date and length of time) for the capture (collection) system, the thermal oxidizer, and/or the monitoring equipment when the emissions unit(s) was/were in operation; and

vi. a log of the operating time for the capture system, thermal oxidizer, monitoring equipment, and the emissions unit(s).

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from the RTO stack for this emissions unit shall not exceed 0.30 pounds per hour.

The combined VOC emissions from the RTO stack for all controlled emissions units (P002, P005, P007, & P008) shall not exceed 14.49 pounds per hour.

The permittee shall maintain a control device, a Regenerative Thermal Oxidizer (RTO), capable of achieving a destruction efficiency of at least 95% for VOC emissions.

Applicable Compliance Method:

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

i. The emission testing shall be conducted within 6 months prior to the expiration of this FEPTIO;

ii. The emission testing shall be conducted to demonstrate compliance with the combined allowable mass emission rates for VOC and the destruction efficiency requirements for VOC;

iii. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates: for VOC, Method 25 or Method 25A of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Hamilton County Department of Environmental Services. The test methods which must be employed to demonstrate compliance with the Capture Efficiency and control efficiency requirements for organic compounds are specified below;

iv. The tests shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Hamilton County Department of Environmental Services; and

v. The destruction efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10 or the approved alternative test protocol (e.g., the mass balance protocol approved on 10/25/95, or another approved alternative.

The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

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

Personnel from the Hamilton County Department of Environmental Services shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Hamilton County Department of Environmental Services within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Hamilton County Department of Environmental Services.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

1320 pounds of EPS/hour x 0.00497 pound of VOC/pound of EPS = 6.56 pounds of VOC per hour, uncontrolled.

6.56 pounds VOC/hour x (0.91 CaE) x (1 – 0.95 CE) = 0.298 pound of VOC/hour, RTO stack, rounded to 0.30 pound of VOC/hour.

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.0444 pound of pentane, Aging Bags – 0.01332 pound of pentane lost in SB01 – SB-16 = 0.03108 pound of pentane, Molding Presses.

0.03108 pound of pentane, Molding Presses/pound EPS x 0.16 pound of pentane emissions, lost (VOC)/pound of pentane, Molding Presses = 0.00497 pound of VOC/pound EPS.

CaE = Capture Efficiency; CE = Control Efficiency (RTO destruction efficiency)

b. Emission Limitation:

Fugitive, uncontrolled VOC emissions from this emissions unit shall not exceed 0.59 pound per hour.

Applicable Compliance Method:

If required, compliance with the fugitive VOC emission limitation may be demonstrated by test methodology including, but not limited to, Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M. The permittee may request to use an alternative method or procedure for the determination of Capture Efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency" dated January 9, 1995.

The short-term VOC emission limitations were established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

1320 pounds of EPS/hour x 0.00497 pound of VOC/pound of EPS = 6.56 pounds of VOC per hour, uncontrolled.

6.56 pounds of VOC/hour x (1 – 0.91 CaE) = 0.59 pound of VOC/hour, fugitive.

c. Emission Limitation:

Emissions of VOC from the RTO stack and fugitive emissions, combined, for emissions units P007 and P008, combined, shall not exceed 4.88 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(4)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.00497 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 36.03 TPY of VOC, uncontrolled.

36.03 TPY of VOC x (1 – 0.91 CaE) = 3.243 TPY of VOC, fugitive.

36.03 TPY of VOC x (0.91 CaE) x (1 – 0.95 CE) = 1.639 TPY of VOC, RTO stack.

3.243 TPY + 1.639 TPY = 4.882 TPY, rounded to 4.88 TPY of VOC.

g) Miscellaneous Requirements

(1) None.

6. P009, DRYING-01

Operations, Property and/or Equipment Description:

Block and shape EPS process - 7320 pounds/hr Product Drying, fugitive emissions

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. b)(1)b., b)(2)b., c)(1), d)(1), d)(2), e)(2) and f)(1)b.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 19.11 pounds per hour. See b)(2)b. The requirement of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from this emissions unit shall not exceed 18.92 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emissions limitation is based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limitation.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for this emissions unit shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) The permittee shall maintain monthly records of the following information for emissions unit P009:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

fugitive emissions from building:

[pentane loss from emissions unit P009 (0.00261 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d(2)a. (pounds of EPS beads/month) x Ton/2000 pounds] = Tons of VOC/month; and,

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

fugitive emissions from building:

[pentane loss from emissions unit P009 (0.00261 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d)(2)b. (pounds of EPS beads/rolling, 12-month period) x Ton/2000 pounds] = Tons of VOC/rolling, 12-month period.

(3) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation; and

iii. allexceedances of the rolling, 12-month VOC emissions limitation.

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 19.11 pounds per hour.

Applicable Compliance Method:

If required, compliance with the short-term VOC emission limitation shall be demonstrated by multiplying the actual EPS usage rate in DRYING-01 (pounds of EPS/hour) by the pentane Emission Factor (pound of pentane emissions/pound of EPS) as outlined in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006.

The pentane Emission Factor shall be calculated by multiplying the actual pentane content of the EPS raw material in DRYING-01 (pound of pentane/pound of EPS) by the amount of pentane emitted in DRYING-01 (pound of pentane emissions/pound of pentane).

The short-term VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

7320 pounds of EPS/hour x 0.00261 pound of VOC/pound of EPS = 19.105 pounds of VOC per hour, rounded to 19.11 pounds of VOC per hour

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.03108 pound of pentane, Molding Presses – 0.00497 pound of pentane lost in VAC-01, SHP-01, and SHP-02 = 0.02611 pound of pentane, Product Drying

0.0261 pound pentane, Product Drying/pound EPS x 0.10 pound pentane emissions, lost (VOC)/pound pentane, Product Drying = 0.00261 pound VOC/pound EPS

b. Emission Limitation:

Emissions of VOC from this emissions unit shall not exceed 18.92 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(2)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.00261 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 18.92 TPY of VOC.

g) Miscellaneous Requirements

(1) None.

7. P012, CTL-01

Operations, Property and/or Equipment Description:

Block and shape EPS process - 6000 pounds/hr block cutting operation CTL-01, fugitive emissions

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. b)(1)b., b)(2)b., c)(1), d)(1), d)(2), e)(2) and f)(1)b.

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 no. 14-05540 was issued on 06/08/2004 for the installation of this emissions unit and an administrative modification of that permit was issued on 10/12/2006.]	Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 5.64 pounds per hour. See b)(2)b. The requirements of this rule also include compliance with OAC rule 3745-31-05(D).
b.	OAC rule 3745-31-05(D) Synthetic Minor to avoid non-attainment New Source Review and Title V for VOC	Emissions of VOC from this emissions unit shall not exceed 6.82 tons per year (TPY), based on a rolling, 12-month summation. See c)(1).

(2) Additional Terms and Conditions

a. The short-term emissions limitation is based on the emissions unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with this limitation.

b. The maximum pentane content of the EPS (Expandable Polystyrene) beads, as supplied, shall not exceed 6.9% by weight.

c) Operational Restrictions

(1) The maximum annual EPS bead usage rate for this emissions unit shall not exceed 14,500,000 pounds per year, based on a rolling, 12-month summation of the EPS bead usage rate.

This emissions unit has been in operation for more than 12 months and, as such, the permittee has existing records to generate the rolling, 12-month summation of the EPS bead usage upon issuance of this permit and therefore first year monthly EPS usage restrictions are not required.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the chemical analyses of the EPS beads provided by the supplier for each lot, shipment or box of EPS beads delivered to the facility. This analysis shall include the percent (%) by weight pentane in the EPS beads.

(2) The permittee shall maintain monthly records of the following information for emissions unit P012:

a. the EPS bead usage rate, in pounds, for each month;

b. the updated rolling, 12-month summation of the EPS bead usage rate, in pounds. This shall include the information for the current month and the preceding eleven months;

c. the actual OC (pentane) emissions, in tons for each month, shall be a summation of the following:

fugitive emissions from building:

[pentane loss from emissions unit P012 (0.00094 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d(2)a. (pounds of EPS beads/month) x Ton/2000 pounds] = Tons of VOC/month; and,

d. the updated rolling, 12-month summation of the actual OC (pentane) emissions, in tons for each month. This shall include the information for the current month and the preceding eleven months:

fugitive emissions from building:

[pentane loss from emissions unit P012 (0.00094 pound of pentane (VOC)/pound of EPS beads) x the actual EPS bead usage rate from d)(2)b. (pounds of EPS beads/rolling, 12-month period) x Ton/2000 pounds] = Tons of VOC/rolling, 12-month period.

(3) The permit to install for emissions units P001, P002, P005, P007, P008, P009, and P012 was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by the emissions units using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: pentane

TLV (ug/m3): 1,770,000

Maximum Hourly Emission Rate (lbs/hr): 74.1 (RTO stack and building fugitives, combined)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 5958

MAGLC (ug/m3): 42,143

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

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

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

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

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required, even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) meet(s) the definition of a "modification" under other provisions of the rule, then the permittee shall obtain a final permit to install prior to the change.

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

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

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

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

e) Reporting Requirements

(1) 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 District Office or Local Air Agency, 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 signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. 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:

i. all exceedances of the EPS bead pentane content limitation;

ii. all exceedances of the rolling, 12-month EPS bead usage rate limitation; and

iii. allexceedances of the rolling, 12-month VOC emissions limitation.

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).

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 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 appropriate District Office or local air agency).

(3) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted 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 twelve months for each air contaminant source identified in this permit.

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:

Emissions of volatile organic compounds (VOC) from this emissions unit shall not exceed 5.64 pounds per hour.

Applicable Compliance Method:

If required, compliance with the short-term VOC emission limitation shall be demonstrated by multiplying the actual EPS usage rate in DRYING-01 (pounds of EPS/hour) by the pentane Emission Factor (pound of pentane emissions/pound of EPS) as outlined in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006.

The pentane Emission Factor shall be calculated by multiplying the actual pentane content of the EPS raw material in DRYING-01 (pound of pentane/pound of EPS) by the amount of pentane emitted in DRYING-01 (pound of pentane emissions/pound of pentane).

The short-term VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

6000 pounds of EPS/hour x 0.00094 pound of VOC/pound EPS = 5.64 pounds of VOC per hour.

The pentane Emission Factor was calculated from information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

0.02611 pound of pentane, Product Drying – 0.00261 pound of pentane lost in DRYING-01 = 0.02349 pound of pentane, Block Cutting.

0.02349 pound of pentane, Block Cutting/pound EPS x 0.04 pound of pentane emissions, lost (VOC)/pound of pentane, Block Cutting = 0.00094 pound of VOC/pound of EPS.

b. Emission Limitation:

Emissions of VOC from this emissions unit shall not exceed 6.82 tons per year (TPY), based on a rolling, 12-month summation.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emission limitation shall be demonstrated by the recordkeeping in d)(2)d.

The rolling, 12-month VOC emission limitation was established based on information supplied in Application A0048618 for FEPTIO P0115883 and the Application for PTI 14-05540, 10/12/2006:

14,500,000 pounds of EPS/year x 0.00094 pound of VOC/pound of EPS x 1 Ton/2000 pounds = 6.82 TPY of VOC.

g) Miscellaneous Requirements

(1) None.