



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center  
122 S. Front Street  
Columbus, OH 43215

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

04/08/03

**RE: Proposed Title V Chapter 3745-77 Permit**

**05-75-01-0146  
Norcold**

Attn: Genevieve Damico AR-18J  
United States Environmental Protection Agency  
Region V  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

Dear Ms. Damico:

The proposed issuance of the Title V permit for Norcold, has been created in Ohio EPA's State Air Resources System (STARS) on 04/08/03, for review by USEPA. This proposed action is identified in STARS as  3-Title V Proposed Permit +C covering the facility specific terms and conditions, and  Title V Proposed Permit covering the general terms and conditions. This proposed permit will be processed for issuance as a final action after forty-five (45) days from USEPA's receipt of this certified letter if USEPA does not object to the proposed permit. Please contact me at (614) 644-3631 by the end of the forty-five (45) day review period if you wish to object to the proposed permit.

Very truly yours,

  
Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: Southwest District Office  
File, DAPC PMU



State of Ohio Environmental Protection Agency

**PROPOSED TITLE V PERMIT**

Issue Date: 04/08/03	Effective Date: To be entered upon final issuance	Expiration Date: To be entered upon final issuance
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This document constitutes issuance of a Title V permit for Facility ID: 05-75-01-0146 to:  
 Norcold  
 401 East Fifth Street  
 Dayton, OH 45402-2911

**Emissions Unit ID (Company ID)/Emissions Unit Activity Description**

P007 (NA2 Polyurethane Foaming Operation) Emissions from polyurethane foaming operation.	P010 (System Polyurethane Operation) Emissions from polyurethane foaming operation.	P014 (T-12 Polyurethane Operation) Emissions from polyurethane foaming operation.
P008 (Dual Electric Polyurethane Foaming Operation) Emissions from polyurethane foaming operation.	P011 (Cabinet Polyurethane Foaming Operation) Emissions from polyurethane foaming operation.	P015 (Small EG Polyurethane Operation) Emissions from polyurethane foaming operation.
P009 (Door Polyurethane Foaming Operation) Emissions from polyurethane foaming operation.	P013 (Test Polyurethane Operation) Emissions from polyurethane foaming operation.	

You will be contacted approximately eighteen (18) months prior to the expiration date regarding the renewal of this permit. If you are not contacted, please contact the appropriate Ohio EPA District Office or local air agency listed below. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, provided that a complete renewal application is submitted no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Described below is the current Ohio EPA District Office or local air agency that is responsible for processing and administering your Title V permit:

Southwest District Office  
 (513) 285-6357

OHIO ENVIRONMENTAL PROTECTION AGENCY

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Christopher Jones  
 Director

## PART I - GENERAL TERMS AND CONDITIONS

### A. *State and Federally Enforceable Section*

#### 1. **Monitoring and Related Record Keeping and Reporting Requirements**

a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

- i. The date, place (as defined in the permit), and time of sampling or measurements.
- ii. The date(s) analyses were performed.
- iii. The company or entity that performed the analyses.
- iv. The analytical techniques or methods used.
- v. The results of such analyses.
- vi. The operating conditions existing at the time of sampling or measurement.

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

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

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

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

i. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.

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

ii. **All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) with respect to emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:**

(a) Written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations ; (ii) the probable cause of such deviations; and (iii) any corrective actions or preventive measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, i.e., in Part III of this Title V permit, the written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters. In identifying each deviation,

the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These written reports shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the submission of monitoring reports every six months and the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations. See B.6 below if no deviations occurred during the quarter.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i), (ii) and (iii))*

- (b) Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the deviation reporting requirements for this Title V permit, written reports that identify each malfunction that occurred during each calendar quarter shall be submitted, at a minimum, quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year, and shall cover the previous calendar quarters.

In identifying each deviation caused by a malfunction, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Also, if a deviation caused by a malfunction is identified in a written report submitted pursuant to paragraph (a) above, a separate report is not required for that malfunction pursuant to this paragraph. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing, at a minimum, on a quarterly basis.

Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation, operational restriction, and control device operating parameter limitation shall be reported in the same manner as described above for malfunctions. These written reports for malfunctions (and scheduled maintenance projects, if appropriate) shall satisfy the requirements (in part) of OAC rule 3745-77-07(A)(3)(c)(iii) pertaining to the prompt reporting of all deviations.

*(Authority for term: OAC rules 3745-77-07(A)(3)(c)(iii))*

iii. **For monitoring, record keeping, and reporting requirements:**

Written reports that identify any deviations from the federally enforceable monitoring, record keeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year, for the previous six calendar months. In

identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. These semi-annual written reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c)(i) and (ii) pertaining to the reporting of any deviations related to the monitoring, record keeping, and reporting requirements. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no deviations occurred during that period.

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

- iv. Each written report shall be signed by a responsible official certifying that, "based on information and belief formed after reasonable inquiry, the statements and information in the report (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete."

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

## **2. Scheduled Maintenance/Malfunction Reporting**

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

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

## **3. Risk Management Plans**

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

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

## **4. Title IV Provisions**

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

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

## **5. Severability Clause**

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

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

**6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.10 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

*(Authority for term: OAC rule 3745-77-07(A)(7))*

**7. Fees**

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

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

**8. Marketable Permit Programs**

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

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

**9. Reasonably Anticipated Operating Scenarios**

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

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

## **10. Reopening for Cause**

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

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

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

## **11. Federal and State Enforceability**

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

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

## **12. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
  - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d. Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
  - i. Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.
  - ii. Compliance certifications shall include the following:

- (a) An identification of each term or condition of this permit that is the basis of the certification.
  - (b) The permittee's current compliance status.
  - (c) Whether compliance was continuous or intermittent.
  - (d) The method(s) used for determining the compliance status of the source currently and over the required reporting period.
  - (e) Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.
- iii. Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

### **13. Permit Shield**

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

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

### **14. Operational Flexibility**

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

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

### **15. Emergencies**

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

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

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

## **16. Off-Permit Changes**

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

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

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

(For purposes of clarification, the permittee can refer to Engineering Guide #63 that is available in the STARSHIP software package.) *(Authority for term: OAC rule 3745-77-07(I))*

## **17. Compliance Method Requirements**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the

permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Fed. Reg. 8314, Feb. 24, 1997), in the context of any future proceeding.  
*(This term is provided for informational purposes only.)*

**18. Insignificant Activities**

Each insignificant activity that has one or more applicable requirements shall comply with those applicable requirements.

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

**19. Permit to Install Requirement**

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

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

**20. Air Pollution Nuisance**

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

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

**B. State Only Enforceable Section**

**1. Reporting Requirements Related to Monitoring and Record Keeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31

of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**2. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**3. Inspections and Information Requests**

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

**4. Scheduled Maintenance/Malfunction Reporting**

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

**5. Permit Transfers**

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

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

**Facility Name:** Norcold  
**Facility ID:** 05-75-01-0146

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

## Part II - Specific Facility Terms and Conditions

### A. State and Federally Enforcable Section

None

### B. State Only Enforceable Section

1. The following insignificant emissions units are located at this facility:

Z001 -Inline #1 Plastic Vacuum Former  
Z002- Inline #2 Plastic Vacuum Former  
Z003- Inline #3 Plastic Vacuum Former  
Z004- Blue Rotary (Plastic Vacuum Former)  
Z005- Brown Rotary (Plastic Vacuum Former)  
Z006- FIN Machine  
Z007- Bulk Propane Tank  
Z008- Parts Cleaner  
Z009- Tank A1 (Storage Tank of Isocyanate Material with 1000-Gallon Capacity)  
Z010- Tank A2 (Storage Tank of Isocyanate Material with 1000-Gallon Capacity)  
Z011- Tank A3 (Storage Tank of Isocyanate Material with 1000-Gallon Capacity)  
Z012- Tank A4 (Storage Tank of Isocyanate Material with 1000-Gallon Capacity)  
Z013- Tank A5 (Storage Tank of Isocyanate Material with 1000-Gallon Capacity)  
Z014- Tank B1 (Storage Tank of Resin Material with 1000-Gallon Capacity)  
Z015- Tank B2 (Storage Tank of Resin Material with 1000-Gallon Capacity)  
Z016- Tank B3 (Storage Tank of Resin Material with 1000-Gallon Capacity)  
Z017- Tank B4 (Storage Tank of Resin Material with 1000-Gallon Capacity)  
Z018- Tank B5 (Storage Tank of Resin Material with 1000-Gallon Capacity)  
Z019- Air Make-Up Unit  
Z020- Modern Rotary

Each insignificant emissions unit at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within a permit to install for the emissions unit.

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** NA2 Polyurethane Foaming Operation (P007)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P007 - NA2 Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	213.0 lbs organic compounds (OC)/day
		39.0 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 213.0 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 39.0 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

- 1.a** Emission Limitation -  
213.0 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(Mta) \times (OCa) \times (EF)] + [(Mtb) \times (OCb) \times (EF)]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
39.0 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P007 - NA2 Foaming Operation	none	none

**2. Additional Terms and Conditions**

**None**

**II. Operational Restrictions**

**None**

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Dual Electric Polyurethane Foaming Operation (P008)

**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P008 - Dual Electric Foaming Process	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	266.4 lbs organic compounds (OC)/day
		48.6 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 266.4 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 48.6 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
266.4 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(\text{Mta}) \times (\text{OCa}) \times (\text{EF})] + [(\text{Mtb}) \times (\text{OCb}) \times (\text{EF})]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
48.6 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P008 - Dual Electric Foaming Process	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Door Polyurethane Foaming Operation (P009)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P009 - Door Polyurethane Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	312.0 lbs organic compounds (OC)/day
		60.4 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 312.0 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 60.4 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
312.0 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(\text{Mta}) \times (\text{OCa}) \times (\text{EF})] + [(\text{Mtb}) \times (\text{OCb}) \times (\text{EF})]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
60.4 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
- Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.
- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P009 - Door Polyurethane Foaming Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** System Polyurethane Operation (P010)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P010 - System Polyurethane Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	129.6 lbs organic compounds (OC)/day
		23.7 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 129.6 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 23.7 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
129.6 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(\text{Mta}) \times (\text{OCa}) \times (\text{EF})] + [(\text{Mtb}) \times (\text{OCb}) \times (\text{EF})]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
23.7 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P010 - System Polyurethane Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

None

### V. Testing Requirements

None

### VI. Miscellaneous Requirements

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Cabinet Polyurethane Foaming Operation (P011)

**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P011 - Cabinet Polyurethane Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	703.2 lbs organic compounds (OC)/day
		128.3 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 703.2 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 128.3 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

## V. Testing Requirements (continued)

- 1.a** Emission Limitation -  
703.2 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(Mta) \times (OCa) \times (EF)] + [(Mtb) \times (OCb) \times (EF)]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
128.3 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P011 - Cabinet Polyurethane Foaming Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Test Polyurethane Operation (P013)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P013 - Test Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-11441)	188.4 lbs organic compounds (OC)/day
		34.3 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-11441) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 188.4 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 34.3 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
188.4 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(\text{Mta}) \times (\text{OCa}) \times (\text{EF})] + [(\text{Mtb}) \times (\text{OCb}) \times (\text{EF})]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
34.3 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P013 - Test Foaming Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

None

### V. Testing Requirements

None

### VI. Miscellaneous Requirements

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** T-12 Polyurethane Operation (P014)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P014 - T-12 Polyurethane Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	13.2 lbs organic compounds (OC)/day
		58.0 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a** The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b** The emission limitation of 13.2 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c** The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 58.0 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
13.2 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(\text{Mta}) \times (\text{OCa}) \times (\text{EF})] + [(\text{Mtb}) \times (\text{OCb}) \times (\text{EF})]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
58.0 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P013 - Test Foaming Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

None

### V. Testing Requirements

None

### VI. Miscellaneous Requirements

None

### Part III - Terms and Conditions for Emissions Units

**Emissions Unit ID:** Small EG Polyurethane Operation (P015)  
**Activity Description:** Emissions from polyurethane foaming operation.

#### A. State and Federally Enforceable Section

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P015 - Small EG Refrigerator Foaming Operation	OAC rule 3745-31-05(A)(3) (PTI 05-09501)	532.8 lbs organic compounds (OC)/day
		97.2 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)
		See section A.II.1.
		The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-07(G) and 3745-31-05(D).
	OAC rule 3745-21-07(G)	See A.II.3.
	OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See section A.I.2.a.

##### 2. Additional Terms and Conditions

- 2.a The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.
- 2.b The emission limitation of 532.8 pounds OC per day was established for PTI purposes to reflect the emissions unit's potential to emit. Therefore, it is not necessary to establish record keeping and reporting requirements to ensure compliance with this limitation.
- 2.c The amounts of methylene diphenyl diisocyanate (MDI) and polymeric methylene diphenyl diisocyanate (PMDI) employed in this emissions unit have been determined to be negligible. This determination was derived from guidance for emission estimates documented in "MDI/Polymeric MDI Emissions Reporting Guidelines For the Polyurethane Industry, from the Polyurethane Division of the Society of the Plastics Industry, Inc.,1996."

## II. Operational Restrictions

1. The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.
2. The maximum percent by weight of OC [chlorofluorocarbons (CFC)] in the polyurethane foam employed in this emissions unit shall not exceed 24% for the A-Side and 10% for the B-side. The percent by weight of OC (for the A-side and the B-side, combined) shall not exceed 18.5%, by weight (considered equivalent to the percent by weight of the blowing agent [chlorodifluoromethane (R-22)] in the foam).
3. The use of any photochemically reactive material in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), is prohibited.

## III. Monitoring and/or Record Keeping Requirements

1. The permittee shall collect and record the following information each month for this emissions unit:
  - a. The name and identification number of each polyurethane foam material employed.
  - b. The amount of each polyurethane foam material employed (A-side), in pounds.
  - c. The amount of each polyurethane foam material employed (B-side), in pounds.
  - d. The OC content, in percent by weight, of each polyurethane foam material employed (A-side).
  - e. The OC content, in percent by weight, of each polyurethane foam material employed (B-side).
  - f. The OC emission rate for all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated as follows:
    - i. for the A-side, multiply A.III.1.b by A.III.1.d and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - ii. for the B-side, multiply A.III.1.c by A.III.1.e and by an OC loss factor of 0.46\*, and then sum the results for all polyurethane foam materials;
    - iii. sum A.III.1.f.i + A.III.1.f.ii.
  - g. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined) {[summation of b for all polyurethane foam materials (A-side) + summation of c for all polyurethane foam materials (B-side)]}/2000, in tons.
  - h. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - i. Documentation on whether or not each polyurethane foam material employed is a photochemically reactive material.
  - j. The amount of OCs in all the polyurethane foam materials employed (for the A-side and B-side, combined), in pounds, calculated by dividing the total OC emissions (from section A.III.1.f.iii above) by 0.46.\*
  - k. The average OC content, in percent by weight, for all the polyurethane foam materials employed (for the A-side and B-side, combined), calculated by dividing the total OCs, from section A.III.1.j above, by the total amount of polyurethane foam materials employed, from section A.III.1.g, multiplied by 2000.

\* 0.46 = loss factor derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"

### **III. Monitoring and/or Record Keeping Requirements (continued)**

2. The permittee shall collect and record the following information for emissions units P007, P008, P009, P010, P011, P013, P014 and P015, combined:
  - a. The total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of all the polyurethane foam materials employed, from section A.III.1.g, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).
  - b. The rolling, 12-month summation of the total amount of all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons.
  - c. The rolling, 12-month summation of the OC emissions for all the polyurethane foam materials employed (for the A-side and B-side, combined), in tons (summation of the OC emissions, from section A.III.1.h, for emissions units P007, P008, P009, P010, P011, P013, P014, and P015).

### **IV. Reporting Requirements**

1. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., for OC contents, in percent (by weight)] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.
2. The permittee shall submit quarterly deviation (excursion) reports that identify the following:
  - a. all exceedances of the rolling, 12-month polyurethane foam usage restriction of 1,980 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined);
  - b. all exceedances of the rolling, 12-month OC emission limitation of 168.3 tons (for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined); and
  - c. all exceedances of the rolling, 12-month OC emission limitation of 97.2 tons (for this emissions unit).

These quarterly deviation reports shall be due by the dates specified in Part 1 - General Terms and Conditions (A)(1)(c).

3. The permittee shall notify the Director in writing of any monthly record showing the use of noncomplying materials [i.e., photochemically reactive materials] in this emissions unit. The notification shall include a copy of such record and shall be sent to the Ohio EPA, Southwest District Office within 30 days following the end of the calendar month.

### **V. Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:

**V. Testing Requirements (continued)**

- 1.a** Emission Limitation -  
532.8 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(Mta) \times (OCa) \times (EF)] + [(Mtb) \times (OCb) \times (EF)]$$

Where:

Mta = the maximum polyurethane foam materials usage (A-side) [lbs/day]

Mtb = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OCa = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OCb = the maximum OC content, in percent by weight, of all the polyurethane foam materials (B-side)

EF = emission/loss factor (0.46) [derived by the permittee based on information found in the document titled "HCFC Emission Reporting Guidelines Notebook from the Society of the Plastics Industry, Inc., 1995"]

If required, compliance shall be determined in accordance with Methods 18, 25, or 25A, as appropriate, of 40 CFR, Part 60, Appendix A. The tested, hourly OC emission rate shall then be multiplied by the maximum daily number of hours of operation.

- 1.b** Emission Limitation -  
The maximum annual polyurethane foam usage (for the A-side and B-side, combined) for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined, shall not exceed 1,980 tons/rolling, 12-month summation.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.c** Emission Limitation -  
The OC emissions for emissions unit P007, P008, P009, P010, P011, P013, P014 and P015, combined, shall not exceed 168.3 tons/rolling, 12-month summation of the monthly OC emission rates.

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in sections A.III.1 and 2 of this permit.

- 1.d** Emission Limitations -  
18.5% percent by weight of OC (for the A-side and B-side, combined)  
24% percent by weight of OC (for the A-side)  
10% percent by weight of OC (for the B-side)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

**V. Testing Requirements (continued)**

- 1.e** Emission Limitation -  
97.2 tons OC/rolling, 12-month summation, from the polyurethane foam usage (for the A-side and B-side, combined)

Applicable Compliance Method -  
Compliance shall be determined through the record keeping requirements specified in section A.III.1 of this permit.

- 2.** Formulation data or USEPA Method 24 shall be used to determine the OC contents of the polyurethane foam materials.

**VI. Miscellaneous Requirements**

**None**

**B. State Enforceable Section**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/ Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P015 - Small EG Refrigerator Foaming Operation	none	none

**2. Additional Terms and Conditions**

None

**II. Operational Restrictions**

None

**III. Monitoring and/or Record Keeping Requirements**

- The permit to install for this emissions unit was evaluated based on the actual materials employed and the design parameters of the emissions unit's 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 the significant pollutant emitted by this emissions unit 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 Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant for emissions units P007, P008, P009, P010, P011, P013, P014, and P015, combined:

Pollutant: Chlorodifluoromethane (R-22)

TLV (mg/m3): 3,536.6

Maximum Hourly Emission Rate (lbs/hr): 332.2

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 11,380

MAGLC (ug/m3): 84,285.7

### III. Monitoring and/or Record Keeping Requirements (continued)

2. Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic 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 applying 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.).
3. 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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 its 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.

### IV. Reporting Requirements

**None**

### V. Testing Requirements

**None**

### VI. Miscellaneous Requirements

**None**

Facility Name: **Norcold, Inc.**  
Facility ID: **05-75-01-0146**

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