

Facility ID: 0575010146 Issuance type: Title V Final Permit

This version of facility specific terms and conditions was converted from a database format to an HTML file during an upgrade of the Ohio EPA, Division of Air Pollution Control's permitting software. Every attempt has been made to convert the terms and conditions to look and substantively conform to the permit issued or being drafted in STARS. However, the format of the terms may vary slightly from the original. In addition, although it is not expected, there is a slight possibility that a term and condition may have been inadvertently "left out" of this reproduction during the conversion process. Therefore, if this version is to be used as a starting point in drafting a new version of a permit, it is imperative that the entire set of terms and conditions be reviewed to ensure they substantively mimic the issued permit. The official version of any permit issued final by Ohio EPA is kept in the Agency's Legal section. The Legal section may be contacted at (614) 644-3037.

In addition to the terms and conditions, hyperlinks have been inserted into the document so you may more readily access the section of the document you wish to review.

Finally, the term language under "Part III" and before "I. Applicable Emissions Limitations..." has been added to aid in document conversion, and was not part of the original issued permit.

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## Part II - Specific Facility Terms and Conditions

### a State and Federally Enforceable Section

1. None

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### 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.

- [Go to Part III for Emissions Unit P007](#)
- [Go to Part III for Emissions Unit P008](#)
- [Go to Part III for Emissions Unit P009](#)
- [Go to Part III for Emissions Unit P010](#)
- [Go to Part III for Emissions Unit P011](#)
- [Go to Part III for Emissions Unit P013](#)
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**Part III - Terms and Conditions for Emissions Units**

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Facility ID: 0575010146 Emissions Unit ID: P007 Issuance type: Title V Final Permit

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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).  See A.II.3.  See section A.I.2.a.
	OAC rule 3745-21-07(G) OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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### 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"
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).

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### 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.

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#### V. Testing Requirements

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

- a. Emission Limitation -  
213.0 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

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

Where:

M<sub>ta</sub> = the maximum polyurethane foam materials usage (A-side) [lbs/day]

M<sub>tb</sub> = the maximum polyurethane foam materials usage (B-side) [lbs/day]

OC<sub>a</sub> = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

OC<sub>b</sub> = 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.

- 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.

- 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.

- 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.

- 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.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0575010146 Emissions Unit ID: P007 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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	none	none
<b>2. Additional Terms and Conditions</b>		
1. None		

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II. **Operational Restrictions**

1. None

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

1. 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

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.

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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**VI. Miscellaneous Requirements**

- 1. None

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

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**Facility ID: 0575010146 Emissions Unit ID: P008 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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)	266.4 lbs organic compounds (OC)/day

(PTI 05-09501)

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).

See A.II.3.

See section A.I.2.a.

OAC rule 3745-21-07(G)  
OAC rule 3745-31-05 (D)  
(PTI 05-09501)  
(synthetic minor to avoid PSD review)

## 2. Additional Terms and Conditions

- 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.
- 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.
- 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."

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### 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.

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### 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"
- 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).

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#### 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.

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#### V. Testing Requirements

- 1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation - 266.4 pounds OC/day
    - Applicable Compliance Method - Compliance may be determined as follows:
    - OC emissions (lbs/day) = [(Mta) x (OCa) x (EF)] + [(Mtb) x (OCb) x (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.

- 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P008 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none

2. **Additional Terms and Conditions**

1. None

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#### II. Operational Restrictions

1. None

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

1. 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

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.

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#### IV. Reporting Requirements

1. None

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#### V. Testing Requirements

1. None

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VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0575010146 Emissions Unit ID: P009 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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).  See A.II.3. See section A.I.2.a.
	OAC rule 3745-21-07(G) OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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### 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)  $\{[\text{summation of b for all polyurethane foam materials (A-side)} + \text{summation of c for all polyurethane foam materials (B-side)}]/2000$ , 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"
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).

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### 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.

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V. **Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation -  
312.0 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.
  - 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P009 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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

- 1. 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

- 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.

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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**VI. Miscellaneous Requirements**

- 1. None

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**Facility ID: 0575010146 Emissions Unit ID: P010 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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).

See A.II.3.

See section A.I.2.a.

OAC rule 3745-21-07(G)  
OAC rule 3745-31-05 (D)  
(PTI 05-09501)  
(synthetic minor to avoid PSD review)

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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**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)  $\{[\text{summation of b for all polyurethane foam materials (A-side)} + \text{summation of c for all polyurethane foam materials (B-side)}]\}/2000$ , 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"
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).

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#### 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.

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#### V. Testing Requirements

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation -  
129.6 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.

- 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P010 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none
2. <b>Additional Terms and Conditions</b>		

1. None

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**II. Operational Restrictions**

1. None

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

1. 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

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.

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**IV. Reporting Requirements**

1. None

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**V. Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0575010146 Emissions Unit ID: P011 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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).  See A.II.3. See section A.I.2.a.
	OAC rule 3745-21-07(G) OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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### 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"
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).

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### 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.

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V. **Testing Requirements**

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

- 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.

- 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.

- 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.

- 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.

- 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P011 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none

2. **Additional Terms and Conditions**

- 1. None

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II. **Operational Restrictions**

- 1. None

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

- 1. 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

- 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.

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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**VI. Miscellaneous Requirements**

- 1. None

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

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**Facility ID: 0575010146 Emissions Unit ID: P013 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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).

See A.II.3.

See section A.I.2.a.

OAC rule 3745-21-07(G)  
OAC rule 3745-31-05 (D)  
(PTI 05-11441)  
(synthetic minor to avoid PSD review)

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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**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"
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).

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#### 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.

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#### V. Testing Requirements

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:
- a. Emission Limitation -  
188.4 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.

- 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P013 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none
2. <b>Additional Terms and Conditions</b>		

1. None

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#### II. Operational Restrictions

1. None

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

1. 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

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.

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#### IV. Reporting Requirements

1. None

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#### V. Testing Requirements

1. None

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VI. **Miscellaneous Requirements**

1. None

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**Facility ID: 0575010146 Emissions Unit ID: P014 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

**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) OAC rule 3745-31-05 (D) (PTI 05-09501) (synthetic minor to avoid PSD review)	See A.II.3. See section A.I.2.a.

**2. Additional Terms and Conditions**

- 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.
- 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.
- 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."

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**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.

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### 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"
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).

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### 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.

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V. **Testing Requirements**

1. Compliance with the emissions limitations of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation -  
13.2 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.
  - 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

1. None

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Facility ID: 0575010146 Emissions Unit ID: P014 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

1. None.

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>
2.	P013 - Test Foaming Operation	none	none
	<b>Additional Terms and Conditions</b>		
1.	None		

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II. **Operational Restrictions**

1. None

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

1. 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

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.

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**IV. Reporting Requirements**

- 1. None

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**V. Testing Requirements**

- 1. None

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**VI. Miscellaneous Requirements**

- 1. None

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

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**Facility ID: 0575010146 Emissions Unit ID: P015 Issuance type: Title V Final Permit**

**A. State and Federally Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

**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).

See A.II.3.

See section A.I.2.a.

OAC rule 3745-21-07(G)  
OAC rule 3745-31-05 (D)  
(PTI 05-09501)  
(synthetic minor to avoid PSD  
review)

## 2. Additional Terms and Conditions

- 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.
- 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.
- 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."

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### 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.

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### 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)  $\{[\text{summation of b for all polyurethane foam materials (A-side)} + \text{summation of c for all polyurethane foam materials (B-side)}]\}/2000$ , 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"

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).

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#### 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.

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#### V. Testing Requirements

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

a. Emission Limitation -  
532.8 pounds OC/day

Applicable Compliance Method -  
Compliance may be determined as follows:

$$\text{OC emissions (lbs/day)} = [(M_{ta}) \times (\text{OC}_a) \times (\text{EF})] + [(M_{tb}) \times (\text{OC}_b) \times (\text{EF})]$$

Where:

$M_{ta}$  = the maximum polyurethane foam materials usage (A-side) [lbs/day]

$M_{tb}$  = the maximum polyurethane foam materials usage (B-side) [lbs/day]

$\text{OC}_a$  = the maximum OC content, in percent by weight, of all the polyurethane foam materials (A-side)

$\text{OC}_b$  = 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.

- 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.
  - 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.
  - 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.
  - 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.

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VI. **Miscellaneous Requirements**

- 1. None

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Facility ID: 0575010146 Emissions Unit ID: P015 Issuance type: Title V Final Permit

**B. State Enforceable Section**

The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

- 1. None.

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	none	none

2. **Additional Terms and Conditions**

- 1. None

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**II. Operational Restrictions**

1. None

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

1. 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

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.

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**IV. Reporting Requirements**

1. None

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**V. Testing Requirements**

1. None

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VI. **Miscellaneous Requirements**

1. None