



Environmental  
Protection Agency

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

1/30/2012

Pamela Blakley *Via E-Mail Notification*  
United States Environmental Protection Agency  
Mail Code: AR-18J  
77 West Jackson Blvd.

Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT  
Facility Name: Invacare Corporation  
Facility ID: 0247040179  
Permit Type: Renewal  
Permit Number: P0085290

Dear Ms. Blakley:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page <http://www.epa.ohio.gov/dapc> in Microsoft Word and Adobe Acrobat format. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-3631 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

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

Cc: Ohio EPA DAPC, Northeast District Office





## **PROPOSED**

### **Division of Air Pollution Control Title V Permit for Invacare Corporation**

Facility ID:	0247040179
Permit Number:	P0085290
Permit Type:	Renewal
Issued:	1/30/2012
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance





Division of Air Pollution Control
Title V Permit
for
Invacare Corporation

Table of Contents

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



- 29. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations ..... 15
- B. Facility-Wide Terms and Conditions..... 16
- C. Emissions Unit Terms and Conditions ..... 19
  - 1. P006, Cannon High Pressure Foam..... 20
  - 2. P007, Decker Low Pressure Foam..... 27
  - 3. R001, Coating Booth..... 34
  - 4. R002, Coating Booth..... 46
  - 5. R003, Coating Booth..... 58
  - 6. R004, Coating Booth..... 70
  - 7. Emissions Unit Group - Insignificant EUs: P009, P010,..... 82

## Authorization

Facility ID: 0247040179  
Facility Description: Manufacturer of wheelchairs  
Application Number(s): A0015928, A0015929, A0041533  
Permit Number: P0085290  
Permit Description: Title V renewal permit for coating/adhesive booths and polyurethane foam process lines.  
Permit Type: Renewal  
Issue Date: 1/30/2012  
Effective Date: To be entered upon final issuance  
Expiration Date: To be entered upon final issuance  
Superseded Permit Number: P0085289

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

Invacare Corporation  
1200 Taylor Street  
Elyria, OH 44035-2125

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

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

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Northeast District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally  
Director



## **A. Standard Terms and Conditions**



## 1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
- (1) Standard Term and Condition A. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions
  - (2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions
  - (3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting
  - (4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

*(Authority for term: ORC 3704.036(A))*

## 2. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
- (1) The date, place (as defined in the permit), and time of sampling or measurements.
  - (2) The date(s) analyses were performed.
  - (3) The company or entity that performed the analyses.
  - (4) The analytical techniques or methods used.
  - (5) The results of such analyses.
  - (6) The operating conditions existing at the time of sampling or measurement.

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

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

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

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

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

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

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

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

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

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

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive

**Effective Date:** To be entered upon final issuance

measures taken, shall be promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

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

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

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

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

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

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

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



insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

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

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

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

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

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

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

- (5) Reports of any required monitoring and/or record keeping information shall be submitted to Ohio EPA DAPC, Northeast District Office.

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

### **3. Scheduled Maintenance**

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

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

### **4. Risk Management Plans**

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



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

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

## **5. Title IV Provisions**

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

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

## **6. Severability Clause**

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

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

## **7. General Requirements**

- a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition A.11 below. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the



Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

- (1) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when: the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or
- (2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or
- (3) a combination of (1) and (2) above.

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

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

## **8. Fees**

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

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

## **9. Marketable Permit Programs**

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

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

## **10. Reasonably Anticipated Operating Scenarios**

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

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

## 11. Reopening for Cause

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

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

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

## 12. Federal and State Enforceability

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

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

## 13. Compliance Requirements

- a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

- (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with paragraph (E) of OAC rule 3745-77-03.
  - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c) The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
  - (2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.
- d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) and the Administrator of the U.S. EPA in the following manner and with the following content:
- (1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted (i.e., postmarked) on or before April 30th of each year during the permit term.
  - (2) Compliance certifications shall include the following:
    - a. An identification of each term or condition of this permit that is the basis of the certification.
    - b. The permittee's current compliance status.
    - c. Whether compliance was continuous or intermittent.
    - d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.
    - e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.



- (3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

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

#### 14. Permit Shield

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

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

#### 15. Operational Flexibility

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

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

#### 16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met. This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

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

#### 17. Off-Permit Changes

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



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

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

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

## **18. Compliance Method Requirements**

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

*(This term is provided for informational purposes only.)*

## **19. Insignificant Activities or Emissions Levels**

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

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

## **20. Permit to Install Requirement**

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

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



**21. Air Pollution Nuisance**

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

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

**22. Permanent Shutdown of an Emissions Unit**

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

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

No emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

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

**23. Title VI Provisions**

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

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

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

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

The permittee shall submit required reports in the following manner:

- a) Reports of any required monitoring and/or record keeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**25. Records Retention Requirements Under State Law Only**

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

**26. Inspections and Information Requests**

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

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



**27. Scheduled Maintenance/Malfunction Reporting**

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

**28. Permit Transfers**

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

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

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

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

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

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

## **B. Facility-Wide Terms and Conditions**



1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

a) None.

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

- B002 Air conditioning and heating unit;
- B003 Lennox heating unit (gas fired);
- B004 Lennox heating unit (gas fired);
- B005 Lennox heating unit (gas fired);
- B006 Space heater (Reznor);
- B007 Space heater (Reznor);
- B008 Space heater (Reznor);
- B009 Reznor heating unit (gas fired);
- B010 Ruud hotwater heater;
- B013 400 Kw Kohlar emergency electrical generator(Taylor Street);
- B017 Natural gas-fired generator (Taylor Parkway);
- N001 Burn off oven;
- N002 Drying/curing ovens (6);
- P011 Laser cutters (4);
- P012 Cut-off machines (5);
- P013 Stamping machine;
- P014 Burmaster;
- P015 Metl Saw;
- P016 Progressive dye;
- P017 Fly wheel presses;
- P018 Rotation finishdeburring (2);
- P019 Benders (18);
- P020 Presses (33);
- P021 Grinders, no controls (7);
- P022 Grinders, with controls (3);
- P023 Drills (18);
- P024 Specialty welding (13);
- P025 ID reamer;
- P026 Sand blasters;
- P027 Rim expander;
- P028 Roller;
- P029 Riveter;
- P030 Brazing units (23);
- P031 TIG welding stations (11);
- P032 MIG welding stations/manual and robotic (16);
- P033 Sheerer;
- P034 Logo applicator;
- P035 CNC machines;
- P036 Aqueous cleaners (2);
- P037 Powder coating;

P038 Foam carving;  
P039 Wood shop operations;  
P041 Puncher; and  
P042 750 kilowatt Kohler emergency generator (IT building).

3. 40 CFR Part 63, Subpart A – General Provisions Applicability to 40 CFR Part 63, Subpart III

The permittee is subject to the following requirements specified in 40 CFR Part 63, Subpart A, as listed in Table 2 of 40 CFR Part 63, Subpart III:

- 63.1;
- 63.2;
- 63.3;
- 63.4;
- 63.5;
- 63.6(a)-(d);
- 63.6(e)(1)-(2);
- 63.6(f)-(g);
- 63.6(i)-(j);
- 63.9(a)-(d);
- 63.9(i)-(j);
- 63.10(a)-(b);
- 63.10(d)(1);
- 63.10(d)(4)-(5);
- 63.10(f);
- 63.11;
- 63.12;
- 63.13;
- 63.14; and
- 63.15.

## **C. Emissions Unit Terms and Conditions**



1. P006, Cannon High Pressure Foam

Operations, Property and/or Equipment Description:

Polyurethane foam process-14 station cannon high pressure foam machine (located at Taylor Street facility)

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Table with 3 columns: Rule/Requirement, Emissions Limitations/Control Measures. Rows include OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D)(1)(b), and 40 CFR Part 63, Subpart III.

(2) Additional Terms and Conditions

a. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

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

b. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

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

c. This emissions unit produces molded flexible polyurethane foam. The permittee has opted to comply with 40 CFR Part 63, Subpart III, by restricting material use as specified in c)(1) and c)(2).

## c) Operational Restrictions

- (1) A HAP or HAP-based material shall not be used as an equipment cleaner to flush the mixhead, nor shall it be used elsewhere as an equipment cleaner in a molded flexible polyurethane foam process, with the following exception. Diisocyanates may be used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production.

[Authority for term: 40 CFR 63.1300(a) and PTI 02-19205]

- (2) A HAP-based mold release agent shall not be used in the molded flexible polyurethane foam source process.

[Authority for term: 40 CFR 63.1300(b) and PTI 02-19205]

## d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:

## a. For all coating booths at the facility:

- i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
- ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
- iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
- iv. the total HAP emissions for all coating booths of each individual HAP [summation of (ii x iii) for each HAP for all coatings, adhesives, and cleanup materials]; and
- v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].

## b. For all reactants used in the foam process lines at the facility:

- i. the name and identification number of each reactant;
- ii. the number of molds produced;
- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
    - i. the name and identification number of each equipment cleaner, as applied;
    - ii. the volume in gallons of each equipment cleaner, as applied;
    - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
    - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
    - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].
  - d. For all mold release agents used in the foam process lines at the facility:
    - i. the name and identification number of each mold release agent, as applied;
    - ii. the volume in gallons of each mold release agent, as applied;
    - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;

- iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(1)a.iv, d)(1)b.iv, d)(1)c.iv, and d)(1)d.iv for each individual HAP and d)(1)a.v, d)(1)b.v, d)(1)c.v, and d)(1)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (2) The permittee shall collect and/or record the following information for the purpose of determining VOC and HAP emissions from this emissions unit:
- a. product data sheet(s) for each reactant employed, that includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each reactant; and
  - b. the number of molds produced each day and the volume of air displaced for all molds.

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 63.1307(h), and PTI 02-19205]

- (3) The permittee shall maintain a product data sheet for each compound, other than recovered diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, which includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each solvent other than diisocyanates used to flush the mixhead and associated piping during period of startup or maintenance.

[Authority for term: 40 CFR 63.1307(g) and PTI 02-19205]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (3) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as an equipment cleaner, except for diisocyanates used in a closed-loop system to flush the mixhead and associated piping during periods of startup or maintenance and which are re-used in production.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-19205]

- (4) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as a mold release agent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-19205]

- (5) The permittee shall submit quarterly deviation reports that identify each HAP-containing solvent and/or mold release agent applied, and for which a product data sheet is not maintained which documents the HAP content, in kg of HAP/kg solids (lb HAP/lb solids).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-19205]

- (6) The permittee shall submit an annual compliance certification documenting compliance with 40 CFR Part 63, Subpart III. The annual compliance certification required pursuant to this Title V operating permit may be used to satisfy this requirement, providing the items in a and b below are addressed in the certification.

Pursuant to 40 CFR 63.1308(e), failure to meet the requirements below shall be a violation. Violation of each item listed in 'a' and 'b' below shall be considered a separate violation:

- a. each calendar day that a HAP-based material is used as an equipment cleaner, except for diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production, is a violation; and
- b. each calendar day that a HAP-based material is used as a mold release agent is a violation.

Each compliance certification submitted pursuant to this section shall be signed by a responsible official of the company that owns or operates the affected source.

[Authority for term: 40 CFR 63.1306(g), 40 CFR 63.1308(a) and (e), and PTI 02-19205]

- (7) The permittee shall submit an annual report by January 31 of each year to the Ohio EPA, Northeast District Office, for the previous calendar year. The report shall document the allowable OC emissions of 0.99 ton per year and the actual OC emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-19205]

f) Testing Requirements

(1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

HAP emissions shall not exceed 0.99 ton per year.

Applicable Compliance Method:

i. Compliance with the annual HAP emission limitation shall be determined using the following equation from “MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry”, 2004, published by the Alliance for the Polyurethanes Industry:

$$Lc = Vair * (1/359) * (273.15/Tproc) * (VPmdi/760) * Mw * Kmdi$$

where:

Lc = the emissions from the enclosed process in lb/year;

Vair = the annual volume of displaced air in ft<sup>3</sup>/year;

Tproc = the process temperature in K;

VPmdi = the vapor pressure of MDI in mm Hg at process temperature;

Mw = 250.26 (the molecular weight of MDI);

Kmdi = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-19205]

b. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

c. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

g) Miscellaneous Requirements

(1) None.



2. P007, Decker Low Pressure Foam

Operations, Property and/or Equipment Description:

Polyurethane foam process--8 station decker low pressure foam machine (located at Cleveland Street facility)

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Table with 3 columns: Applicable Rules/Requirements, Applicable Emissions Limitations/Control Measures. Rows include OAC rule 3745-31-05(A)(3), OAC rule 3745-31-05(D)(1)(b), and 40 CFR Part 63, Subpart III.

(2) Additional Terms and Conditions

a. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

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

b. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

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

c. This emissions unit produces molded flexible polyurethane foam. The permittee has opted to comply with 40 CFR Part 63, Subpart III, by restricting material use as specified in c)(1) and c)(2).

## c) Operational Restrictions

- (1) A HAP or HAP-based material shall not be used as an equipment cleaner to flush the mixhead, nor shall it be used elsewhere as an equipment cleaner in a molded flexible polyurethane foam process, with the following exception. Diisocyanates may be used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production.

[Authority for term: 40 CFR 63.1300(a) and PTI 02-20548]

- (2) A HAP-based mold release agent shall not be used in the molded flexible polyurethane foam source process.

[Authority for term: 40 CFR 63.1300(b) and PTI 02-20548]

## d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:

## a. For all coating booths at the facility:

- i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
- ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
- iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
- iv. the total HAP emissions for all coating booths of each individual HAP [summation of (ii x iii) for each HAP for all coatings, adhesives, and cleanup materials]; and
- v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].

## b. For all reactants used in the foam process lines at the facility:

- i. the name and identification number of each reactant;
- ii. the number of molds produced;
- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
- i. the name and identification number of each equipment cleaner, as applied;
  - ii. the volume in gallons of each equipment cleaner, as applied;
  - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
  - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].
- d. For all mold release agents used in the foam process lines at the facility:
- i. the name and identification number of each mold release agent, as applied;
  - ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;

- iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(1)a.iv, d)(1)b.iv, d)(1)c.iv, and d)(1)d.iv for each individual HAP and d)(1)a.v, d)(1)b.v, d)(1)c.v, and d)(1)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (2) The permittee shall collect and/or record the following information for the purpose of determining VOC and HAP emissions from this emissions unit:
- a. product data sheet(s) for each reactant employed, that includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each reactant; and
  - b. the number of molds produced each day (each mold is assumed to displace 0.8 ft<sup>3</sup> of air).

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 63.1307(h), and PTI 02-20548]

- (3) The permittee shall maintain a product data sheet for each compound, other than recovered diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, which includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each solvent other than diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance.

[Authority for term: 40 CFR 63.1307(g) and PTI 02-20548]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations

occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (3) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as an equipment cleaner, except for diisocyanates used in a closed-loop system to flush the mixhead and associated piping during periods of startup or maintenance and which are re-used in production.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20548]

- (4) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as a mold release agent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20548]

- (5) The permittee shall submit quarterly deviation reports that identify each HAP-containing solvent and/or mold release agent applied, and for which a product data sheet is not maintained which documents the HAP content, in kg of HAP/kg solids (lb HAP/lb solids).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20548]

- (6) The permittee shall submit an annual compliance certification documenting compliance with 40 CFR Part 63, Subpart III. The annual compliance certification required pursuant to this Title V operating permit may be used to satisfy this requirement, providing the items in a and b below are addressed in the certification.

Pursuant to 40 CFR 63.1308(e), failure to meet the requirements below shall be a violation. Violation of each item listed in a and b below shall be considered a separate violation:

- a. each calendar day that a HAP-based material is used as an equipment cleaner, except for diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production, is a violation; and
- b. each calendar day that a HAP-based material is used as a mold release agent is a violation.

Each compliance certification submitted pursuant to this section shall be signed by a responsible official of the company that owns or operates the affected source.

[Authority for term: 40 CFR 63.1306(g), 40 CFR 63.1308(a) and (e), and PTI 02-20548]

- (7) The permittee shall submit an annual report by January 31 of each year to the Ohio EPA, Northeast District Office, for the previous calendar year. The report shall document the allowable OC emissions of 0.99 ton per year and the actual OC emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20548]

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

HAP emissions shall not exceed 0.99 ton per year.

Applicable Compliance Method:

- i. Compliance with the annual HAP emission limitation shall be determined using the following equation from “MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry”, 2004, published by the Alliance for the Polyurethanes Industry:

$$Lc = Vair * (1/359) * (273.15/Tproc) * (VPmdi/760) * Mw * Kmdi$$

where:

Lc = the emissions from the enclosed process in lb/year;

Vair = the annual volume of displaced air in ft<sup>3</sup>/year;

Tproc = the process temperature in K;

VPmdi = the vapor pressure of MDI in mm Hg at process temperature;

Mw = 250.26 (the molecular weight of MDI);

Kmdi = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20548]

b. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.



Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

c. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

g) Miscellaneous Requirements

- (1) None.



**3. R001, Coating Booth**

**Operations, Property and/or Equipment Description:**

Spray booth to apply waterproof coating, primer and clear coat on cushions at Cleveland Street facility (formerly DAPC Emissions Unit ID: R003)

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) d)(5), d)(6), d)(7) and e)(6)
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (P0109088)	Organic compound (OC) emissions shall not exceed 1216.7 pounds per month, including cleanup materials.  OC emissions shall not exceed 7.3 tons per year, including cleanup materials.  Visible particulate emissions shall not exceed 5% opacity as a 6-minute average. See c)(1).  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-11(C).
b.	OAC rule 3745-21-07(M)	None. See b)(2)a.
c.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(C)	See c)(1).
e.	OAC rule 3745-31-05(D)(1)(b)	See b)(2)b and b)(2)c.
f.	ORC 3704.03(F)	See d)(5) through d)(7) and e)(6).

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no control device for this emissions unit.

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

- b. The emissions of each individual hazardous air pollutant (HAP) from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- c. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

c) Operational Restrictions

- (1) The permittee shall operate the dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall establish an operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from all coating and adhesive materials employed for this emissions unit:

- a. the company identification for each coating and adhesive employed;
- b. the number of gallons of each coating and adhesive employed;
- c. the OC content of each coating and adhesive employed, in pounds per gallon; and
- d. the total OC emission rate for all coatings and adhesives employed, in pounds per month, calculated as the sum of b x c for all such materials employed.

Note: The coating and adhesive information must be for the coatings and adhesives as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (2) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from cleanup:
- a. the company identification for each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the OC content of each cleanup material, in pounds per gallon; and
  - d. the total OC emission rate for all cleanup materials, in pounds per month, calculated as the sum of  $b \times c$  for each such material.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (3) The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (4) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:
- a. For all coating booths at the facility:
    - i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
    - ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
    - iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
    - iv. the total combined HAP emissions for all coating booths of each individual HAP [summation of  $(ii \times iii)$  for each HAP for all coatings, adhesives, and cleanup materials]; and
    - v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].
  - b. For all reactants used in the foam process lines at the facility:
    - i. the name and identification number of each reactant;
    - ii. the number of molds produced;

Effective Date: To be entered upon final issuance

- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$Lc = Vair * (1/359) * (273.15/Tproc) * (VPmdi/760) * Mw * Kmdi$$

where:

Lc = the emissions from the enclosed process in lb/month;

Vair = the monthly volume of displaced air in ft<sup>3</sup>/month;

Tproc = the process temperature in K;

VPmdi = the vapor pressure of MDI in mm Hg at process temperature;

Mw = 250.26 (the molecular weight of MDI);

Kmdi = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
- i. the name and identification number of each equipment cleaner, as applied;
  - ii. the volume in gallons of each equipment cleaner, as applied;
  - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
  - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].

- d. For all mold release agents used in the foam process lines at the facility:
  - i. the name and identification number of each mold release agent, as applied;
  - ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(4)a.iv, d)(4)b.iv, d)(4)c.iv, and d)(4)d.iv for each individual HAP and d)(4)a.v, d)(4)b.v, d)(4)c.v, d)(4)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (5) The permit-to-install for this emissions unit, R001, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each of the toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each of the toxic compounds emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices";  
or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$\text{TLV}/10 \times 8/\text{X} \times 5/\text{Y} = 4 \text{ TLV}/\text{XY} = \text{MAGLC}$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminants:

Toxic Contaminant: acetone

TLV (ug/m3): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 6.76

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1346

MAGLC (ug/m3): 42,300

Toxic Contaminant: toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.98

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 978

MAGLC (ug/m3): 4476

Toxic Contaminant: MEK

TLV (ug/m3): 590,000

Maximum Hourly Emission Rate (lbs/hr): 2.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 474

MAGLC (ug/m3): 14,047

**Effective Date:** To be entered upon final issuance

The permittee has demonstrated that emissions of acetone, toluene, and MEK from emissions unit R001, are calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-20794]

- (6) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the changes to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, 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 new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-20794]

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

**Effective Date:** To be entered upon final issuance

- b. The Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
- c. A copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. The documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-20794]

- (8) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA Northeast District Office upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall maintain documentation of an internal operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (9) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (10) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct annual inspections of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (11) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date of the inspection and any necessary maintenance or repairs were completed and shall be made available to the Ohio EPA Northeast District Office upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (12) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. an identification of any daily record showing that the dry filtration system was not in service or not operated according to the manufacturer's recommendations (with any documented modifications made by the permittee) when the emissions unit was in operation.

If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all

emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the monthly OC emissions from this emissions unit exceeded 1216.7 pounds per month, and the actual OC emissions for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (5) The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

- (6) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminate Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01] and Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 1216.7 pounds per month, including cleanup materials.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements contained in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials.

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

b. Emission Limitation:

OC emissions shall not exceed 7.3 tons per year, including cleanup materials.

Applicable Compliance Method:

Compliance with the annual emission limitation of 7.3 tons per year shall be based upon the record keeping requirements in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials on an annual basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

c. Emission Limitation:

Visible particulate emissions shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9, and OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

d. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(4) of these terms and conditions.

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

e. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(4) of these terms and conditions.

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

- (2) The permittee shall use USEPA Method 24 or formulation data to determine the VOC contents of the coatings.

US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-20794]

g) Miscellaneous Requirements

- (1) None.



4. R002, Coating Booth

Operations, Property and/or Equipment Description:

Spray booth to apply waterproof coating, primer and clear coat on cushions at Taylor Street facility

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

(1) d)(5), d)(6), d)(7) and e)(6)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (P0109090)	Organic compound (OC) emissions shall not exceed 1216.7 pounds per month, including cleanup materials.  OC emissions shall not exceed 7.3 tons per year, including cleanup materials.  Visible particulate emissions shall not exceed 5% opacity as a 6-minute average. See Section c)(1) below.  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), and 3745-17-11(C).
b.	OAC rule 3745-21-07(M)	None. See b)(2)a.
c.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(C)	See c)(1).
e.	OAC rule 3745-31-05(D)(1)(b)	See b)(2)b and b)(2)c.
f.	ORC 3704.03(F)	See d)(5) through d)(7) and e)(6).

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no control device for this emissions unit.

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

- b. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

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

- c. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

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

c) Operational Restrictions

- (1) The permittee shall operate the dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall establish an operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from all coating and adhesive materials employed for this emissions unit:

- a. the company identification for each coating and adhesive employed;
- b. the number of gallons of each coating and adhesive employed;
- c. the OC content of each coating and adhesive employed, in pounds per gallon; and
- d. the total OC emission rate for all coatings and adhesives employed, in pounds per month, calculated as the sum of b x c for all such materials employed.

Note: The coating and adhesive information must be for the coatings and adhesives as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (2) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from cleanup:
- a. the company identification for each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the OC content of each cleanup material, in pounds per gallon; and
  - d. the total OC emission rate for all cleanup materials, in pounds per month, calculated as the sum of  $b \times c$  for each such material.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (3) The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (4) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:
- a. For all coating booths at the facility:
    - i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
    - ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
    - iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
    - iv. the total combined HAP emissions for all coating booths of each individual HAP [summation of  $(ii \times iii)$  for each HAP for all coatings, adhesives, and cleanup materials]; and
    - v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].
  - b. For all reactants used in the foam process lines at the facility:
    - i. the name and identification number of each reactant;
    - ii. the number of molds produced;

Effective Date: To be entered upon final issuance

- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
    - i. the name and identification number of each equipment cleaner, as applied;
    - ii. the volume in gallons of each equipment cleaner, as applied;
    - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
    - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
    - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].
  - d. For all mold release agents used in the foam process lines at the facility:

**Effective Date:**To be entered upon final issuance

- i. the name and identification number of each mold release agent, as applied;
  - ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(4)a.iv, d)(4)b.iv, d)(4)c.iv, and d)(4)d.iv for each individual HAP and d)(4)a.v, d)(4)b.v, d)(4)c.v, d)(4)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (5) The permit-to-install for this emissions unit, R002, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each of the toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each of the toxic compounds emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminants:

Toxic Contaminant: acetone

TLV (ug/m3): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 6.76

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 1346

MAGLC (ug/m3): 42,300

Toxic Contaminant: toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 4.98

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 978

MAGLC (ug/m3): 4476

Toxic Contaminant: MEK

TLV (ug/m3): 590,000

Maximum Hourly Emission Rate (lbs/hr): 2.4

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 474

MAGLC (ug/m3): 14,047

The permittee has demonstrated that emissions of acetone, toluene, and MEK from emissions unit R002, are calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing

agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-2200]

- (6) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the changes to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, 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 new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-2200]

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. The Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

- c. A copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. The documentation of the initial evaluation of compliance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-2200]

- (8) The permittee shall maintain documentation of the manufacturer’s recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA Northeast District Office upon request.

If manufacturer’s recommendations, instructions, and/or operating manual(s) are not available, the permittee shall maintain documentation of an internal operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (9) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer’s recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer’s recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

If manufacturer’s recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (10) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer’s recommendations.

If manufacturer’s recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct annual inspections of the dry particulate filter while

the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (11) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the Ohio EPA Northeast District Office upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (12) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. an identification of any daily record showing that the dry filtration system was not in service or not operated according to the manufacturer's recommendations (with any documented modifications made by the permittee) when the emissions unit was in operation.

If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations

occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the monthly OC emissions from this emissions unit exceeded 1216.7 pounds per month, and the actual OC emissions for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (5) The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

- (6) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminate Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01] and Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 1216.7 pounds per month, including cleanup materials.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements contained in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials.

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

b. Emission Limitation:

OC emissions shall not exceed 7.3 tons per year, including cleanup materials.

Applicable Compliance Method:

Compliance with the annual emission limitation of 7.3 tons per year shall be based upon the record keeping requirements and calculated by summing the monthly emissions as determined in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials on an annual basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

c. Emission Limitation:

Visible particulate emissions shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9, and OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]



d. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(4) of these terms and conditions.

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

e. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(4) of these terms and conditions.

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

- (2) The permittee shall use USEPA Method 24 or formulation data to determine the VOC contents of the coatings.

US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-2200]

g) Miscellaneous Requirements

- (1) None.



**5. R003, Coating Booth**

**Operations, Property and/or Equipment Description:**

Spray booth to apply waterproof coating, primer and clear coat on cushions at Taylor Street facility

- a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.
  - (1) d)(5), d)(6), d)(7) and e)(6)
- b) Applicable Emissions Limitations and/or Control Requirements
  - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (P0109091)	Organic compound (OC) emissions shall not exceed 1216.7 pounds per month, including cleanup materials.  OC emissions shall not exceed 7.3 tons per year, including cleanup materials.  Visible particulate emissions shall not exceed 5% opacity as a 6-minute average. See c)(1).  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-11(C).
b.	OAC rule 3745-21-07(M)	None. See b)(2)a.
c.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(C)	See c)(1).
e.	OAC rule 3745-31-05(D)(1)(b)	See b)(2)b and b)(2)c.
f.	ORC 3704.03(F)	See d)(5) through d)(7) and e)(6).

(2) Additional Terms and Conditions

- a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no control device for this emissions unit.

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

- b. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

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

- c. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

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

c) Operational Restrictions

- (1) The permittee shall operate the dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall establish an operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from all coating and adhesive materials employed for this emissions unit:

- a. the company identification for each coating and adhesive employed;
- b. the number of gallons of each coating and adhesive employed;
- c. the OC content of each coating and adhesive employed, in pounds per gallon;
- d. the total OC emission rate for all coatings and adhesives employed, in pounds per month, calculated as the sum of  $b \times c$  for all such materials employed;

**Effective Date:** To be entered upon final issuance

Note: The coating and adhesive information must be for the coatings and adhesives as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (2) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from cleanup:
- a. the company identification for each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the OC content of each cleanup material, in pounds per gallon; and
  - d. the total OC emission rate for all cleanup materials, in pounds per month, calculated as the sum of  $b \times c$  for each such material.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (3) The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (4) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:
- a. For all coating booths at the facility:
    - i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
    - ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
    - iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
    - iv. the total combined HAP emissions for all coating booths of each individual HAP [summation of  $(ii \times iii)$  for each HAP for all coatings, adhesives, and cleanup materials]; and
    - v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].
  - b. For all reactants used in the foam process lines at the facility:
    - i. the name and identification number of each reactant;
    - ii. the number of molds produced;

Effective Date: To be entered upon final issuance

- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
    - i. the name and identification number of each equipment cleaner, as applied;
    - ii. the volume in gallons of each equipment cleaner, as applied;
    - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
    - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
    - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].
  - d. For all mold release agents used in the foam process lines at the facility:

**Effective Date:**To be entered upon final issuance

- i. the name and identification number of each mold release agent, as applied;
  - ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(1)a.iv, d)(1)b.iv, d)(1)c.iv, and d)(1)d.iv for each individual HAP and d)(1)a.v, d)(1)b.v, d)(1)c.v, d)(1)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (5) The permit-to-install for this emissions unit, R003, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each of the toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
- a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each of the toxic compounds emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or "worst case" toxic contaminants:

Toxic Contaminant: acetone

TLV (ug/m3): 1,780,000

Maximum Hourly Emission Rate (lbs/hr): 3.38

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 433

MAGLC (ug/m3): 42,300

Toxic Contaminant: toluene

TLV (ug/m3): 188,000

Maximum Hourly Emission Rate (lbs/hr): 2.49

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 312.2

MAGLC (ug/m3): 4476

Toxic Contaminant: MEK

TLV (ug/m3): 590,000

Maximum Hourly Emission Rate (lbs/hr): 1.22

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 161.12

MAGLC (ug/m3): 14,047

The permittee has demonstrated that emissions of acetone, toluene, and MEK from emissions unit R003, are calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing

agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-16898]

- (6) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the changes to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, 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 new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-16898]

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. The Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

- c. A copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. The documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-16898]

- (8) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA Northeast District Office upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall maintain documentation of an internal operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (9) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (10) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct annual inspections of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to

ensure that it is operated in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (11) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the Ohio EPA Northeast District Office upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (12) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. an identification of any daily record showing that the dry filtration system was not in service or not operated according to the manufacturer's recommendations (with any documented modifications made by the permittee) when the emissions unit was in operation.

If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be

sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the monthly OC emissions from this emissions unit exceeded 1216.7 pounds per month, and the actual OC emissions for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (5) The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (6) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.



[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01] and Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 1216.7 pounds per month, including cleanup materials.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements contained in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials.

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

b. Emission Limitation:

OC emissions shall not exceed 7.3 tons per year, including cleanup materials.

Applicable Compliance Method:

Compliance with the annual emission limitation of 7.3 tons per year shall be based upon the record keeping requirements and calculated by summing the monthly emissions as determined in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials on an annual basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

c. Emission Limitation:

Visible particulate emissions shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9, and OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

d. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the



Effective Date: To be entered upon final issuance

facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3) of these terms and conditions.

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

e. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3) of these terms and conditions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

- (2) The permittee shall use USEPA Method 24 or formulation data to determine the VOC contents of the coatings.

US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-16898]

g) Miscellaneous Requirements

- (1) None.



6. R004, Coating Booth

Operations, Property and/or Equipment Description:

Spray booth to apply waterproof coating, primer and clear coat on cushions at Taylor Street facility

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

(1) d)(5), d)(6), d)(7) and e)(6)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (P0109089)	Organic compound (OC) emissions shall not exceed 1216.7 pounds per month, including cleanup materials.  OC emissions shall not exceed 7.3 tons per year, including cleanup materials.  Visible particulate emissions shall not exceed 5% opacity as a 6-minute average. See c)(1).  The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A) and 3745-17-11(C).
b.	OAC rule 3745-21-07(M)	None. See b)(2)a.
c.	OAC rule 3745-17-07(A)	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-17-11(C)	See c)(1).
e.	OAC rule 3745-31-05(D)(1)(b)	See b)(2)b and b)(2)c.
f.	ORC 3704.03(F)	See d)(5) through d)(7) and e)(6).

- (2) Additional Terms and Conditions
- a. The requirements of OAC rule 3745-21-07(M) are not applicable because there is no control device for this emissions unit.
- [Authority for term: OAC rule 3745-77-07(C)(1)]
- b. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.
- [Authority for term: OAC rule 3745-77-07(C)(1)]
- c. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.
- [Authority for term: OAC rule 3745-77-07(C)(1)]
- c) Operational Restrictions
- (1) The permittee shall operate the dry filtration system for the control of particulate emissions whenever this emissions unit is in operation and shall maintain the dry particulate filter in accordance with the manufacturer's recommendations, instructions, and/or operating manual(s), with any modifications deemed necessary by the permittee.
- If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall establish an operation and maintenance plan for the dry filtration system.
- [Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]
- d) Monitoring and/or Recordkeeping Requirements
- (1) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from all coating and adhesive materials employed for this emissions unit:
- a. the company identification for each coating and adhesive employed;
- b. the number of gallons of each coating and adhesive employed;
- c. the OC content of each coating and adhesive employed, in pounds per gallon;
- d. the total OC emission rate for all coatings and adhesives employed, in pounds per month, calculated as the sum of b x c for all such materials employed;

Note: The coating and adhesive information must be for the coatings and adhesives as employed, including any thinning solvents added at the emissions unit.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (2) The permittee shall collect and record the following information for each month for the purpose of determining annual organic compound emissions from cleanup:
- a. the company identification for each cleanup material employed;
  - b. the number of gallons of each cleanup material employed;
  - c. the OC content of each cleanup material, in pounds per gallon; and
  - d. the total OC emission rate for all cleanup materials, in pounds per month, calculated as the sum of  $b \times c$  for each such material.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (3) The permittee shall maintain daily records that document any time periods when the dry filtration system was not in service when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (4) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:
- a. For all coating booths at the facility:
    - i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
    - ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
    - iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
    - iv. the total combined HAP emissions for all coating booths of each individual HAP [summation of  $(ii \times iii)$  for each HAP for all coatings, adhesives, and cleanup materials]; and
    - v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].
  - b. For all reactants used in the foam process lines at the facility:
    - i. the name and identification number of each reactant;
    - ii. the number of molds produced;

Effective Date: To be entered upon final issuance

- iii. the individual HAP content for each HAP in each reactant;
- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry", 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

- v. the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].
- c. For all equipment cleaners used in the foam process lines at the facility:
- i. the name and identification number of each equipment cleaner, as applied;
  - ii. the volume in gallons of each equipment cleaner, as applied;
  - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
  - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].

**Effective Date:**To be entered upon final issuance

- d. For all mold release agents used in the foam process lines at the facility:
  - i. the name and identification number of each mold release agent, as applied;
  - ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(1)a.iv, d)(1)b.iv, d)(1)c.iv, and d)(1)d.iv for each individual HAP and d)(1)a.v, d)(1)b.v, d)(1)c.v, d)(1)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (5) The permit-to-install for this emissions unit, R004, was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each of the toxic air contaminants emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:
  - a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each of the toxic compounds emitted from the emissions unit, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
    - i. Threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
    - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological

Exposure Indices”; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., “X” hours per day and “Y” days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year) or “worst case” toxic contaminants:

Toxic Contaminant: acetone

TLV (ug/m3): 1,186,000

Maximum Hourly Emission Rate (lbs/hr): 3.38

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 433

MAGLC (ug/m3): 28,240

Toxic Contaminant: toluene

TLV (ug/m3): 188,400

Maximum Hourly Emission Rate (lbs/hr): 2.49

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 312

MAGLC (ug/m3): 4490

Toxic Contaminant: MEK

TLV (ug/m3): 589,800

Maximum Hourly Emission Rate (lbs/hr): 1.22

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 161

MAGLC (ug/m3): 14,040

The permittee has demonstrated that emissions of acetone, toluene, and MEK from emissions unit R004, are calculated to be less than eighty percent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing

agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-18088]

- (6) Prior to making any physical changes to or changes in the method of operation of the emissions unit, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the changes to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, 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 new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV 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 toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
  - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final FEPTIO prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-18088]

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. A description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
  - b. The Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

- c. A copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
- d. The documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

[Authority for term: OAC rule 3745-77-07(C)(1), ORC 3704.03(F), and PTI 02-18088]

- (8) The permittee shall maintain documentation of the manufacturer's recommendations, instructions, or operating manuals for the dry particulate filter, along with documentation of any modifications deemed necessary by the permittee. These documents shall be maintained at the facility and shall be made available to the Ohio EPA Northeast District Office upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall maintain documentation of an internal operation and maintenance plan for the dry filtration system.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (9) The permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the manufacturer's recommendations, instructions, or operating manuals with any modifications deemed necessary by the permittee or operator. These inspections shall be performed at a frequency that shall be based upon the recommendation of the manufacturer and the permittee shall maintain a copy of the manufacturer's recommended inspection frequency and it shall be made available to the Ohio EPA upon request.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct periodic inspections of the dry particulate filter to determine whether it is operating in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (10) In addition to the recommended periodic inspections, not less than once each calendar year the permittee shall conduct a comprehensive inspection of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to ensure that it is operated in accordance with the manufacturer's recommendations.

If manufacturer's recommendations, instructions, and/or operating manual(s) are not available, the permittee shall conduct annual inspections of the dry particulate filter while the emissions unit is shut down and perform any needed maintenance and repair to

ensure that it is operated in accordance with the internal operation and maintenance plan.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (11) The permittee shall document each inspection (periodic and annual) of the dry particulate filter system and shall maintain the following information:
- a. the date of the inspection;
  - b. a description of each/any problem identified and the date it was corrected;
  - c. a description of any maintenance and repairs performed; and
  - d. the name of the person who performed the inspection.

These records shall be maintained at the facility for not less than five years from the date the inspection and any necessary maintenance or repairs were completed and shall be made available to the Ohio EPA Northeast District Office upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (12) The permittee shall maintain records that document any time periods when the dry particulate filter was not in service when the emissions unit was in operation, as well as, a record of all operations during which the dry particulate filter was not operated according to the manufacturer's recommendations with any documented modifications made by the permittee. These records shall be maintained for a period of not less than five years and shall be made available to the Ohio EPA upon request.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that include the following information:
- a. an identification of any daily record showing that the dry filtration system was not in service or not operated according to the manufacturer's recommendations (with any documented modifications made by the permittee) when the emissions unit was in operation.

If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be

sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (3) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (4) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the monthly OC emissions from this emissions unit exceeded 1216.7 pounds per month, and the actual OC emissions for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with Section A of these terms and conditions.

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

- (5) The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

- (6) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

- a. the original model input;
- b. the updated model input;
- c. the reason for the change(s) to the input parameter(s); and
- d. a summary of the results of the updated modeling, including the input changes; and
- e. a statement that the model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

[ORC 3704.03(F)(3)(c) and F(4)], [OAC rule 3745-114-01] and Option A, Engineering Guide #70]

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

OC emissions shall not exceed 1216.7 pounds per month, including cleanup materials.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements contained in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials.

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

b. Emission Limitation:

OC emissions shall not exceed 7.3 tons per year, including cleanup materials.

Applicable Compliance Method:

Compliance with the annual emission limitation of 7.3 tons per year shall be based upon the record keeping requirements and calculated by summing the monthly emissions as determined in d)(1)d and d)(2)d of these terms and conditions and determined by summing the monthly OC emissions from all coating, adhesive, and cleanup materials on an annual basis.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

c. Emission Limitation:

Visible particulate emissions shall not exceed 5% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be demonstrated by performing visible particulate emission observations in accordance with the methods and procedures specified in 40 CFR Part 60, Appendix A, Method 9, and OAC rule 3745-17-03(B)(1).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]



d. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3) of these terms and conditions.

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

e. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3) of these terms and conditions.

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

- (2) The permittee shall use USEPA Method 24 or formulation data to determine the VOC contents of the coatings.

US EPA Method 24 or formulation data shall be used to determine the VOC contents of the cleanup materials.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI 02-18088]

g) Miscellaneous Requirements

- (1) None.



**7. Emissions Unit Group -Insignificant EUs: P009, P010,**

<b>EU ID</b>	<b>Operations, Property and/or Equipment Description</b>
P009	Rigid Foam Blocks (located at Cleveland Street facility)
P010	Cannon I-Skin Foam Machine (located at Taylor Street facility)

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
a.	OAC rule 3745-31-05(A)(3), as effective 11/30/01 (PTI P0106490)	Volatile organic compounds (VOC) emissions shall not exceed 0.23 pound per hour and 0.99 ton per year.  See b)(2)a, b)(2)f, b)(2)g and b)(2)h.
b.	OAC rule 3745-31-05(A)(3)(a)(ii), as effective 12/01/06	See b)(2)b.
c.	OAC rule 3745-31-05(D)(1)(b)	See b)(2)d, b)(2)e and b)(2)f.
d.	40 CFR Part 63, Subpart III	See b)(2)c, c)(1) and c)(2).

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limitations/control measures no longer apply.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

**Effective Date:** To be entered upon final issuance

- b. This rule paragraph applies once U.S. EPA approves the December 1, 2006, version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the VOC emissions from this air contaminant source since the uncontrolled potential to emit for VOCs is less than 10 tpy.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- c. This emissions unit produces molded flexible polyurethane foam. The permittee has opted to comply with 40 CFR Part 63, Subpart III, by restricting material use as specified in c)(1) and c)(2).

- d. The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

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

- e. The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

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

- f. All HAP emissions from this source are VOC.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- g. Potential emissions of VOCs from emissions unit P009 are 0.005 pound per hour and 0.02 ton per year according to the permittee's application. The permittee has requested emission limitations of 0.23 pound per hour and 0.99 ton per year to allow for flexibility in the event material usage and/or production changes in the future. Although potential emissions of VOCs (HAPs) from this emissions unit do not exceed ten pounds per day, OAC rule 3745-15-05(C)(4) precludes this source from permit exemption since this source in combination with other sources of HAPs at the facility would result in potential combined HAP emissions in excess of 25 tons per year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- h. Potential emissions of VOCs from emissions unit P010 are 0.001 pound per hour and 0.003 ton per year according to the permittee's application. The permittee has requested emission limitations of 0.23 pound per hour and 0.99 ton per year to allow for flexibility in the event material usage and/or production changes in the future. Although potential emissions of VOCs (HAPs) from this emissions unit do not exceed ten pounds per day, OAC rule 3745-15-05(C)(4) precludes this source from permit exemption since this source in combination with other

sources of HAPs at the facility would result in potential combined HAP emissions in excess of 25 tons per year.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

c) Operational Restrictions

- (1) A HAP or HAP-based material shall not be used as an equipment cleaner to flush the mixhead, nor shall it be used elsewhere as an equipment cleaner in a molded flexible polyurethane foam process, with the following exception. Diisocyanates may be used to flush the mixhead and associated piping during periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production.

[Authority for term: 40 CFR 63.1300(a) and PTI P0106490]

- (2) A HAP-based mold release agent shall not be used in the molded flexible polyurethane foam source process.

[Authority for term: 40 CFR 63.1300(b) and PTI P0106490]

d) Monitoring and/or Recordkeeping Requirements

- (1) The permittee shall collect and record the following information each month for the purpose of determining facility-wide HAP emissions:
- a. For all coating booths at the facility:
    - i. the name and identification number of each coating, adhesive, and cleanup material, as applied;
    - ii. the volume in gallons of each coating, adhesive, and cleanup material, as applied;
    - iii. the individual HAP content for each HAP in each coating, adhesive, and cleanup material, as applied, in pounds per gallon;
    - iv. the total HAP emissions for all coating booths of each individual HAP [summation of (ii x iii) for each HAP for all coatings, adhesives, and cleanup materials]; and
    - v. the total combined HAP emissions for all coating booths [summation of iv for all HAPs for all coatings, adhesives, and cleanup materials].
  - b. For all reactants used in the foam process lines at the facility:
    - i. the name and identification number of each reactant;
    - ii. the number of molds produced;
    - iii. the individual HAP content for each HAP in each reactant;

**Effective Date:** To be entered upon final issuance

- iv. the total HAP emissions of each individual HAP for all reactants determined using the following equation from “MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry”, 2004, published by the Alliance for the Polyurethanes Industry:

$$L_c = V_{air} * (1/359) * (273.15/T_{proc}) * (VP_{mdi}/760) * M_w * K_{mdi}$$

where:

$L_c$  = the emissions from the enclosed process in lb/month;

$V_{air}$  = the monthly volume of displaced air in ft<sup>3</sup>/month;

$T_{proc}$  = the process temperature in K;

$VP_{mdi}$  = the vapor pressure of MDI in mm Hg at process temperature;

$M_w$  = 250.26 (the molecular weight of MDI);

$K_{mdi}$  = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere;

and

the total combined HAP emissions for all reactants [summation of iv for all HAPs for all reactants].

- c. For all equipment cleaners used in the foam process lines at the facility:
- i. the name and identification number of each equipment cleaner, as applied;
  - ii. the volume in gallons of each equipment cleaner, as applied;
  - iii. the individual HAP content for each HAP in each equipment cleaner, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all equipment cleaners employed [summation of (ii x iii) for all equipment cleaners]; and
  - v. the total combined HAP emissions for all equipment cleaners [summation of iv for all HAPs for all equipment cleaners].
- d. For all mold release agents used in the foam process lines at the facility:
- i. the name and identification number of each mold release agent, as applied;

**Effective Date:** To be entered upon final issuance

- ii. the volume in gallons of each mold release agent, as applied;
  - iii. the individual HAP content for each HAP in each mold release agent, as applied, in pounds per gallon;
  - iv. the total HAP emissions of each individual HAP for all mold release agents employed [summation of (ii x iii) for all mold release agents]; and
  - v. the total combined HAP emissions for all mold release agents [summation of iv for all HAPs for all mold release agents].
- e. The total combined HAP emissions for all emissions units of each individual HAP and total combined HAPs [summation of d)(1)a.iv, d)(1)b.iv, d)(1)c.iv, and d)(1)d.iv for each individual HAP and d)(1)a.v, d)(1)b.v, d)(1)c.v, and d)(1)d.v for all HAP emissions for total combined HAP emissions for all emissions units].

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

- (2) The permittee shall collect and/or record the following information for the purpose of determining VOC and HAP emissions from emissions unit P009:
- a. product data sheet(s) for each reactant employed, that includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each reactant; and
  - b. the number of molds produced each day (each mold is assumed to displace 5.122 ft<sup>3</sup> of air).

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 63.1307(h), and PTI P0106490]

- (3) The permittee shall collect and/or record the following information for the purpose of determining VOC and HAP emissions from emissions unit P010:
- a. product data sheet(s) for each reactant employed, that includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each reactant; and
  - b. the number of molds produced each day (each mold is assumed to displace 0.074 ft<sup>3</sup> of air).

[Authority for term: OAC rule 3745-77-07(C)(1), 40 CFR 63.1307(h), and PTI P0106490]

- (4) The permittee shall maintain a product data sheet for each compound, other than recovered diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance, which includes the HAP content, in kg of HAP/kg solids (lb HAP/lb solids) of each solvent other than diisocyanates used to flush the mixhead and associated piping during periods of startup or maintenance.

[Authority for term: 40 CFR 63.1307(g) and PTI P0106490]

e) Reporting Requirements

- (1) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of any individual HAP from all emissions units at the facility exceeded 9.9 tons per year, and the actual rolling, 12-month emissions of each such individual HAP for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (2) The permittee shall submit quarterly deviation (excursion) reports that identify each month during which the rolling, 12-month emissions of total combined HAPs from all emissions units at the facility exceeded 24.9 tons per year, and the actual rolling, 12-month emissions of total combined HAPs for each such month. If no deviations occurred during any such calendar quarter, a report indicating no deviations shall be sent. The quarterly reports shall be submitted in accordance with the Standard terms and conditions in Section A of this permit.

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

- (3) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as an equipment cleaner, except for diisocyanates used in a closed-loop system to flush the mixhead and associated piping during periods of startup or maintenance and which are re-used in production.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- (4) The permittee shall submit quarterly deviation reports that identify each day in which any HAP-based material was used as a mold release agent.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- (5) The permittee shall submit quarterly deviation reports that identify each HAP-containing solvent and/or mold release agent applied, and for which a product data sheet is not maintained which documents the HAP content, in kg of HAP/kg solids (lb HAP/lb solids).

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

- (6) The permittee shall submit an annual compliance certification documenting compliance with 40 CFR Part 63, Subpart III. The annual compliance certification required pursuant to this Title V operating permit may be used to satisfy this requirement, providing the items in a and b below are addressed in the certification.

Pursuant to 40 CFR 63.1308(e), failure to meet the requirements below shall be a violation. Violation of each item listed in a and b below shall be considered a separate violation:

- a. each calendar day that a HAP-based material is used as an equipment cleaner, except for diisocyanates used to flush the mixhead and associated piping during

**Effective Date:** To be entered upon final issuance

periods of startup or maintenance, provided that the diisocyanate compounds are contained in a closed-loop system and are re-used in production, is a violation; and

- b. each calendar day that a HAP-based material is used as a mold release agent is a violation.

Each compliance certification submitted pursuant to this section shall be signed by a responsible official of the company that owns or operates the affected source.

[Authority for term: 40 CFR 63.1306(g), 40 CFR 63.1308(a) and (e), and PTI P0106490]

- (7) The permittee shall submit an annual report by January 31 of each year to the Ohio EPA, Northeast District Office, for the previous calendar year. The report shall document the allowable OC emissions of 0.99 ton per year and the actual OC emissions.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

f) Testing Requirements

- (1) Compliance with the emission limitations in b)(1) of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation:

VOC emissions shall not exceed 0.23 pound per hour and 0.99 ton per year.

- a. Applicable Compliance Method:

- i. Compliance with the annual VOC emission limitation shall be determined using the following equation from “MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry”, 2004, published by the Alliance for the Polyurethanes Industry:

$$Lc = Vair * (1/359) * (273.15/Tproc) * (VPmdi/760) * Mw * Kmdi$$

where:

Lc = the emissions from the enclosed process in lb/year;

Vair = the annual volume of displaced air in ft<sup>3</sup>/year;

Tproc = the process temperature in K;

VPmdi = the vapor pressure of MDI in mm Hg at process temperature;

Mw = 250.26 (the molecular weight of MDI);

Kmdi = the adjustment factor to the vapor pressure that is a function of MDI concentration in the feedstock and the temperature; and

**Effective Date:** To be entered upon final issuance

359 = the molar volume of an ideal gas in ft<sup>3</sup>/lb-mole @ 0 degrees Celsius and 1-atmosphere.

- ii. Compliance with the hourly VOC emission limitation can be assumed based on the potential to emit as described in b)(2)g and b)(2)h.

[Authority for term: OAC rule 3745-77-07(C)(1) and PTI P0106490]

b. Emission Limitation:

The emissions of each individual HAP from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 9.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

c. Emission Limitation:

The emissions of the total combined HAPs from emissions units R001, R002, R003, R004, P006, P007, P009, and P010, and all other emission sources at the facility, including but not limited to de minimis, exempt, and combustion sources, shall not exceed 24.9 tons per year, based upon a rolling, 12-month summation.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(1) of these terms and conditions.

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

g) Miscellaneous Requirements

- (1) None.