



State of Ohio Environmental Protection Agency

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10/27/2009

Mr. James Wilgus  
AS AMERICA, INC.-SALEM, OH PLANT  
605 S. Ellsworth Avenue  
Salem, OH 44460

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE  
Facility ID: 0215090011  
Permit Number: P0104854  
Permit Type: OAC Chapter 3745-31 Modification  
County: Columbiana

Certified Mail

Yes	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR
No	CEMS
No	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate ("PTIO") which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully.

Ohio EPA maintains a document entitled "Frequently Asked Questions about the PTIO". The document can be downloaded from the DAPC Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc), from the "Permits" link. This document contains additional information related to your permit, such as what activities are covered under the PTIO, who has enforcement authority over the permit and Ohio EPA's authorization to inspect your facility and records. Please contact the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469 if you need assistance.

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission ("ERAC") under Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and describe the action complained of and the grounds for the appeal. The appeal must be filed with the ERAC within thirty (30) days after notice of the Director's action. A filing fee of \$70.00 must be submitted to the ERAC with the appeal, although the ERAC, has discretion to reduce the amount of the filing fee if you can demonstrate (by affidavit) that payment of the full amount of the fee would cause extreme hardship. If you file an appeal of this action, you must notify Ohio EPA of the filing of the appeal (by providing a copy to the Director) within three (3) days of filing your appeal with the ERAC. Ohio EPA requests that a copy of the appeal also be provided to the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the ERAC at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit has been posted to the Division of Air Pollution Control (DAPC) Web page [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc).

Sincerely,

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

Cc: Ohio EPA-NEDO

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director





**State of Ohio Environmental Protection Agency  
Division of Air Pollution Control**

**FINAL**

**Air Pollution Permit-to-Install and Operate  
for  
AS AMERICA, INC.-SALEM, OH PLANT**

Facility ID: 0215090011  
Permit Number: P0104854  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 10/27/2009  
Effective: 10/27/2009  
Expiration: 5/15/2014





**Air Pollution Permit-to-Install and Operate**  
for  
**AS AMERICA, INC.-SALEM, OH PLANT**

**Table of Contents**

- Authorization ..... 1
- A. Standard Terms and Conditions ..... 4
  - 1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 5
  - 2. Who is responsible for complying with this permit? ..... 5
  - 3. What records must I keep under this permit? ..... 5
  - 4. What are my permit fees and when do I pay them?..... 5
  - 5. When does my PTIO expire, and when do I need to submit my renewal application? ..... 5
  - 6. What happens to this permit if my project is delayed or I do not install or modify my source? ..... 6
  - 7. What reports must I submit under this permit? ..... 6
  - 8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit? ..... 6
  - 9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 6
  - 10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? ..... 6
  - 11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? ..... 7
  - 12. What happens if one or more emissions units operated under this permit is/are shut down permanently? ..... 7
  - 13. Can I transfer this permit to a new owner or operator?..... 7
  - 14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? ..... 8
  - 15. What happens if a portion of this permit is determined to be invalid? ..... 8
- B. Facility-Wide Terms and Conditions..... 9
- C. Emissions Unit Terms and Conditions ..... 12
  - 1. K001, Smallware Finish Coating Line..... 13
  - 2. P010, Acrylics Whirlpool Assembly ..... 18
  - 3. P011, Smallware Finishing Station 1..... 22
  - 4. P012, Smallware Finishing Station 2..... 26
  - 5. P013, Smallware Finishing Station 3..... 30
  - 6. P014, Smallware Lavy Assembly Area..... 34
  - 7. P015, Tubs Final Cleaning and Grinding..... 38
  - 8. P016, Tubs Department Glue Station..... 43
  - 9. R005, Tubs Ground Coat Spray Booth..... 47
  - 10. R008, FRP Lamination Line #1 ..... 53



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

11. R009, Tubs Department Americast I Primer Booth.....	62
12. R012, Americast I System 1 Clamps #1 and #2 .....	70
13. R013, Americast I System 2 Clamps #3 and #4 .....	75
14. R014, Americast II System 3 Clamps #5 and #6 .....	80
15. R015, Americast II System 4 Clamps #7 and #9 .....	85
16. R019, Smallware Enamel Ground Coating Line .....	90
17. R020, Tubs Finish Coating Line .....	95
18. R022, FRP Lamination Line #2 .....	100
19. R023, Americast I Admiral System Clamp #8.....	109



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** P0104854  
**Facility ID:** 0215090011  
**Effective Date:** 10/27/2009

## Authorization

Facility ID: 0215090011  
Application Number(s): A0015001, A0037360  
Permit Number: P0104854  
Permit Description: Chapter 31 modification due to changes to R009  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$200.00  
Issue Date: 10/27/2009  
Effective Date: 10/27/2009  
Expiration Date: 5/15/2014  
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

AS AMERICA, INC.-SALEM, OH PLANT  
605 S. Ellsworth Avenue  
Salem, OH 44460

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

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

Ohio EPA DAPC, Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 43087  
(330)425-9171

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Chris Korleski  
Director



## Authorization (continued)

Permit Number: P0104854  
Permit Description: Chapter 31 modification due to changes to R009

Permits for the following emissions unit(s) or groups of emissions units are in this document as indicated below:

<b>Emissions Unit ID:</b>	<b>K001</b>
Company Equipment ID:	Smallware Finish Coating Line
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P010</b>
Company Equipment ID:	Acrylics Whirlpool Assembly
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P011</b>
Company Equipment ID:	Smallware Finishing Station 1
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P012</b>
Company Equipment ID:	Smallware Finishing Station 2
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P013</b>
Company Equipment ID:	Smallware Finishing Station 3
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P014</b>
Company Equipment ID:	Smallware Lavy Assembly Area
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P015</b>
Company Equipment ID:	Tubs Final Cleaning and Grinding
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>P016</b>
Company Equipment ID:	Tubs Department Glue Station
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R005</b>
Company Equipment ID:	Tubs Ground Coat Spray Booth
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R008</b>
Company Equipment ID:	FRP Lamination Line #1
Superseded Permit Number:	02-18111
General Permit Category and Type:	Not Applicable
<b>Emissions Unit ID:</b>	<b>R009</b>
Company Equipment ID:	Tubs Department Americast I Primer Booth
Superseded Permit Number:	02-18111



General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R012**

Company Equipment ID: Americast I System 1 Clamps #1 and #2  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R013**

Company Equipment ID: Americast I System 2 Clamps #3 and #4  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R014**

Company Equipment ID: Americast II System 3 Clamps #5 and #6  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R015**

Company Equipment ID: Americast II System 4 Clamps #7 and #9  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R019**

Company Equipment ID: Smallware Enamel Ground Coating Line  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R020**

Company Equipment ID: Tubs Finish Coating Line  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R022**

Company Equipment ID: FRP Lamination Line #2  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable

**Emissions Unit ID:**

**R023**

Company Equipment ID: Americast I Admiral System Clamp #8  
Superseded Permit Number: 02-18111  
General Permit Category and Type: Not Applicable



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** P0104854  
**Facility ID:** 0215090011  
**Effective Date:** 10/27/2009

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



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

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

**2. Who is responsible for complying with this permit?**

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

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

**3. What records must I keep under this permit?**

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.



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

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

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

**7. What reports must I submit under this permit?**

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

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

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

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

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

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

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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Ohio EPA DAPC, Northeast District Office in accordance with OAC



rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

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

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

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

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

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

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

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

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

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

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

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

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

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

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.  
  
None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.  
  
B.2, B.3 and B.4.
2. The total emissions from all of the air contaminant sources at this facility (except those units that are defined as trivial by Ohio EPA DAPC Engineering Guide 62) shall not exceed the following emissions limitations for any rolling, 12-month period:
  - a) 95.0 tons of Volatile Organic Compounds (VOCs)
  - b) 9.50 tons of any single Hazardous Air Pollutant (HAP)
  - c) 24.50 tons of \*aggregate HAPs  
  
(\*Aggregate HAPs primarily consist of styrene and toluene. Methylene diphenyl diisocyanate, or MDI, is listed as a HAP. MDI emissions may be generated at R012, R013, R014, R015, R018, and R023. Since the vapor pressure of MDI is very low, MDI emissions are negligible.)
3. At the end of each month, the permittee shall collect, calculate, and record the following information:
  - a) The actual rolling, 12-month summation of the VOC, Styrene, Toluene, (any single HAP), and aggregate HAPs emissions, calculated by adding the current month's emissions from all the air contaminant sources at this facility (except those units that are defined as trivial by Ohio EPA DAPC Engineering Guide 62) to the emissions for the preceding eleven calendar months.  
  
The VOC emissions would be from all of the VOC containing (non-frit, i.e., non-borosilicate or non-porcelain enamel) coatings, resins, adhesives, mold cleaners, mold release agents, sealers, primers, solvents, and cleanup materials applied in all air contaminant sources at the facility.  
  
1.084 tons of VOC emissions shall be added to the actual rolling, 12-month VOC emissions records, to represent the potential annual VOC emissions from the combustion of natural gas in the drying ovens, curing furnaces, and the thermal oxidizer, permitted in the following air contaminant sources: K001, R005, R008, R009, R018, R019, R020, and R022.
4. The permittee shall submit quarterly deviation (excursion) reports that identify any rolling, 12-month period during which the sum of the emissions from all of the air contaminant sources at this facility (except those units that are defined as trivial by Ohio EPA DAPC Engineering Guide 62) exceed any of the limitations in B.2.

These reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Service) quarterly to the Ohio EPA Northeast District Office by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

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



**1. K001, Smallware Finish Coating Line**

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

Smallware Department Finish Coat Line vented to 2 dust collectors (ES-05 and ES-06). This operation includes a primary and auxiliary spray booth, drying oven, and curing furnace.

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

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

None.

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

b)(1)e

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from this emissions unit shall not exceed the following limitations from process operations:</p> <p>particulate emissions (PE) shall not exceed 0.47 pound per hour and 2.06 tons per year from dust collectors ES-05 and ES-06.</p> <p>Visible particulate emissions shall not exceed 10% opacity as a 6-minute average.</p> <p>Emissions from the combustion of natural gas in the drying oven and curing furnace shall not exceed the following limitations:</p> <p>PE shall not exceed 0.01 pound per hour and 0.05 ton per year;</p>



Applicable Rules/Requirements

Applicable Emissions Limitations/Control Measures

organic compound (OC) emissions shall not exceed 0.06 pound per hour and 0.27 ton per year;

volatile organic compound (VOC) emissions shall not exceed 0.03 pound per hour and 0.14 ton per year;

nitrogen oxide (NOx) emissions shall not exceed 0.57 pound per hour and 2.50 tons per year;

carbon monoxide (CO) emissions shall not exceed 0.48 pound per hour and 2.10 tons per year; and

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.003 pound per hour and 0.01 ton per year.

c. OAC rule 3745-17-07(A)

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

d. OAC rule 3745-17-11

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

e. OAC rule 3745-31-05(D)(1)(b)

See B.2, B.3 and B.4.

Additional Terms and Conditions

None.

c) Operational Restrictions

The permittee shall operate the dust collectors (ES-05 and ES-06) whenever this emissions unit is in operation.

The pressure drop across each of the dust collectors (ES-05 and ES-06) shall be maintained within the following ranges while the emissions unit is in operation:

ES-05: 2.2 to 5.5 inches of water

ES-06: 5.0 to 7.5 inches of water

The permittee shall burn only natural gas in the drying oven and curing furnace serving this emissions unit. The emissions from natural gas combustion are permitted at the potential usage of natural gas in all of the drying ovens contained in this permit.



d) Monitoring and/or Recordkeeping Requirements

The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collectors (ES-05 and ES-06) while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

At the end of each year the permittee shall collect and record the total tons of frit coatings applied in this air contaminant source, to be used in the annual demonstration of compliance with the particulate emission limitation from overspray, by applying the annual tons of frit coating employed in the calculation of the estimated emissions contained in f)(1)(b).

e) Reporting Requirements

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

0.47 pound per hour of particulate emissions (total from dust collectors ES-05 and ES-06)

Applicable Compliance Method:

This limit represents the estimated controlled potential emissions of this air contaminant source, calculated as follows:

$$(107 \text{ parts/hr}) \times (2.5 \text{ lbs coat/part}) \times (100\% - 30\% \text{TE}) \times (25\% \text{ to filter}^*) \times (100\% - 99\% \text{ control for ES-05 and ES-06}) = 0.47 \text{ lb/hr}$$

If required by the Ohio EPA, compliance with the allowable particulate emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.



\* it is estimated that a minimum of 75% of the overspray is collected in the reclaim trough

Emission Limitation:

2.06 tons per year of particulate emissions (total from dust collectors ES-05 and ES-06)

Applicable Compliance Method:

The annual emission limitation is based on the allowable hourly emission rate (0.47 lb/hr) multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. In order to demonstrate compliance with the annual particulate emission limitation from frit coatings, the following calculation shall be performed at the end of each year:

$$PE = (FC \times 70\% \text{ overspray} \times 25\% \text{ to filter} \times 1\% \text{ lost from filter})$$

where:

PE = total estimated particulate emissions from overspray, in tons of PE per year

FC = total annual frit coating usage in this emissions unit, in tons per year

Emission Limitations from natural gas combustion:

- 0.01 pound per hour of particulate emissions;
- 0.06 pound per hour of OC emissions;
- 0.03 pound per hour of VOC emissions;
- 0.57 pound per hour of NO<sub>x</sub> emissions;
- 0.48 pound per hour of CO emissions; and
- 0.003 pound per hour of SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factor from "Compilation of Air Pollutant Emission Factors," Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the oven and furnace (5,700 ft<sup>3</sup>/hr, combined). The emissions factors are 1.9 lbs filterable particulates/mmft<sup>3</sup>, 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>, 11 lbs OC/mmft<sup>3</sup>, 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>, 84 lbs CO/mmft<sup>3</sup>, and 5.5 lbs VOC/mmft<sup>3</sup>. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations from natural gas combustion:

- 0.05 ton per year of particulate emissions;



- 0.27 ton per year of OC emissions;
- 0.14 ton per year of VOC emissions;
- 2.50 tons per year of NO<sub>x</sub> emissions;
- 2.10 tons per year of CO emissions; and
- 0.01 ton per year of SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitations, compliance will also be shown for the annual emission limitations.

Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1) or other U.S.EPA approved test method with prior approval for the Ohio EPA.

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**2. P010, Acrylics Whirlpool Assembly**

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

Acrylics Whirlpool Assembly Operation

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

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

None.

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

b)(1)b, d)(2), e)(1), f)(1)(b)

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Organic compound (OC) emissions from the cleanup of R008, R022 & P010 combined shall not exceed 1,395 lbs per month.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3, B.4 and b)(2)a.
c. OAC rule 3745-21-07(G)	See b)(2)b. and b)(2)c.

**Additional Terms and Conditions**

Volatile organic compound (VOC) emissions from this air contaminant source shall not exceed 209.28 pounds per day, and 38.20 tons per rolling, 12-months.

(The VOC emissions limitations are based on a usage of 355 lbs/day of adhesive (“weld-on”) having 510 grams VOC per liter, and 185 lbs/day of sealer (silicone) having 33 grams VOC per liter.)

This air contaminant source shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State



regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this air contaminant source:

- the company identification for each adhesive, sealer, and cleanup material employed;
- the number of gallons and density or pounds of each adhesive employed;
- the number of gallons or pounds of each sealer employed;
- the number of gallons or pounds of cleanup material employed at P010, R008 and R022 combined;
- the VOC content of each adhesive employed, in pounds per gallon, grams per liter, or in weight percent;
- the VOC content of each sealer employed, in pounds per gallon, grams per liter, or in weight percent;
- the VOC and OC content of the cleanup material employed at P010, R008 and R022 combined, in pounds per gallon, grams per liter, or in weight percent;
- the daily VOC emissions from all adhesives employed, in (or converted to) pounds per day, i.e., the sum of "b" x "e" for each adhesive applied;
- the daily VOC emissions from all sealers employed, in (or converted to) pounds per day, i.e., the sum of "c" x "f" for each sealer applied;
- the daily VOC and OC emissions from all cleanup materials employed at P010, R008 and R022 combined, prior to any credit for recovered cleanup materials, in (or



converted to) pounds per day, i.e., the sum of "d" x "g" for each cleanup material applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials is calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total daily VOC emissions, in lbs VOC/day, i.e., sum of "h" + "i" + "j"(if the cleanup material contains VOC).

The permittee shall collect and record the following information on a monthly basis:

total OC and VOC emissions, calculated as the sum of emissions from all adhesives (sum of d)(1)h.) sealers (sum of d)(1)i.), and cleanup materials (sum of d)(1)j.) employed at this air contaminant source each day during the month;

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall keep the following records on all materials employed in this air contaminant source:

The identification of the chemical compound and its physical state; and

For any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 38.20 tons per rolling, 12-months, and the actual rolling, 12-month VOC emissions during each such month; and

an identification of each day during which the daily VOC emissions from this air contaminant source exceeded the daily limit of 209.28 lbs/day, and the actual daily VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.



These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

209.28 lbs VOC/day

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1)(k).

Emission Limitation:

38.20 tons VOC/rolling, 12-months

Applicable Compliance Method:

Compliance may be demonstrated through the record keeping requirements specified in d)(2).

Emission Limitations:

Organic compound (OC) emissions from the cleanup of P010, R008 & R022 combined shall not exceed 1,395 lbs per month.

Applicable Compliance Method:

Compliance may be demonstrated through the record keeping requirements specified in d)(1)(j) under P010, and d)(5)m under R008 & R022.

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**3. P011, Smallware Finishing Station 1**

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

Smallware Finishing Station 1. This operation uses cleaning solvent rags for wipe cleaning of parts.

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

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

None.

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

b)(1)b, d)(2), e)(1), f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 1.23 pounds per hour and 1.79 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.49 pound per hour and 0.72 ton per rolling, 12-month period.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.
c. OAC rule 3745-21-07(G)	See b)(2)a and b)(2)b.

**Additional Terms and Conditions**

This air contaminant source shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each cleaning solvent employed;

the number of gallons or pounds of each cleaning material employed;

the OC and VOC content of each cleaning material employed, in pounds per gallon or in weight percent;

the daily OC and VOC emissions from all cleaning material(s) employed prior to any credit for recovered cleanup materials, in pounds per day, i.e., the sum of "b" x "c" for each cleanup material applied.

If an emissions credit for recovered cleanup materials is desired, the OC and VOC emissions from the recovered cleanup material during the day may be subtracted from the respective daily VOC and OC emissions calculated above. The OC and VOC emissions from recovered cleanup materials is calculated by the following equation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total number of hours the air contaminant source was in operation, i.e., hours per day; and



the average hourly OC and VOC emissions rates for all cleaning material(s) employed in this air contaminant source, in pounds per hour. i.e., “d” divided by “e” for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;  
and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month’s VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this emissions unit:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 0.72 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.49 lbs/hour, and the actual average hourly VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

1.23 pounds per hour (daily average) of OC emissions and 1.79 tons per year.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.49 pound per hour (daily average) of VOC emissions and 0.72 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**4. P012, Smallware Finishing Station 2**

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

Smallware Finishing Station 2. This operation uses cleaning solvent rags for wipe cleaning of parts.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 1.23 pounds per hour and 1.79 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.49 pound per hour and 0.72 ton per rolling, 12-month period.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.
c. OAC rule 3745-21-07(G)	See b)(2)a and b)(2)b.

**Additional Terms and Conditions**

This emissions unit shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(1)(5).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each cleaning material employed;

the number of gallons or pounds of each cleaning material employed;

the OC and VOC content of each cleaning material employed, in pounds per gallon or in weight percent;

the daily OC and VOC emissions from all cleaning material(s) employed prior to any credit for recovered cleanup material, in pounds per day, i.e., the sum of "b" x "c" for each cleaning material employed;

If an emissions credit for recovered cleanup materials is desired, the OC and VOC emissions from the recovered cleanup material during the day may be subtracted from the respective daily VOC and OC emissions calculated above. The OC and VOC emissions from recovered cleanup materials is calculated by the following equation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total number of hours the air contaminant source was in operation, i.e., hours per day; and



the average hourly OC and VOC emissions rates for all cleaning material(s) employed in this air contaminant source, in pounds per hour, i.e., “d” divided by “e” for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;  
and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month’s VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this emissions unit:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 0.72 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.49 lbs/hour, and the actual average hourly VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

1.23 pounds per hour (daily average) of OC emissions and 1.79 tons per year.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.49 pound per hour (daily average) of VOC emissions and 0.72 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**5. P013, Smallware Finishing Station 3**

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

Smallware Finishing Station 3. This operation uses cleaning solvent rags for wipe cleaning of parts.

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

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

None.

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

b)(1)b, d)(2), e)(1), f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 1.23 pounds per hour and 1.79 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.49 pound per hour and 0.72 ton per rolling, 12-month period.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.
c. OAC rule 3745-21-07(G)	See b)(2)a and b)(2)b.

**Additional Terms and Conditions**

This emissions unit shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(1)(5).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each cleaning material employed;

the number of gallons or pounds of each cleaning material employed;

the OC and VOC content of each cleaning material employed, in pounds per gallon or in weight percent;

the daily OC and VOC emissions from all cleaning material(s) employed prior to any credit for recovered cleanup material, in pounds per day, i.e., the sum of "b" x "c" for each cleaning material employed;

If an emissions credit for recovered cleanup materials is desired, the OC and VOC emissions from the recovered cleanup material during the day may be subtracted from the respective daily VOC and OC emissions calculated above. The OC and VOC emissions from recovered cleanup materials is calculated by the following equation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total number of hours the air contaminant source was in operation, i.e., hours per day; and



the average hourly OC and VOC emissions rates for all cleaning material(s) employed in this air contaminant source, in pounds per hour, i.e., “d” divided by “e” for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;  
and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month’s VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this emissions unit:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 0.72 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.49 lbs/hour, and the actual average hourly VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.



f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

1.23 pounds per hour (daily average) of OC emissions and 1.79 tons per year.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.49 pound per hour (daily average) of VOC emissions and 0.72 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**6. P014, Smallware Lavy Assembly Area**

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

Smallware Lavy Assembly Area. This is an adhesive application area with an exhaust hood venting outside.

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

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

None.

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

b)(1)b, d)(2), e)(1), f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.41 pound per hour and 1.81 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.28 pound per hour and 1.24 tons per rolling, 12-month period.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.
c. OAC rule 3745-21-07(G)	See b)(2)a and b)(2)b.

**Additional Terms and Conditions**

This emissions unit shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(1)(5).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each adhesive employed;

the number of gallons and density or pounds of each adhesive employed;

the OC and VOC content of each adhesive employed, in pounds per gallon, grams per liter, or in weight percent;

the daily OC and VOC emissions from all adhesives employed, in (converted to) pounds per day, i.e., the sum of "b" x "c" for each adhesive employed;

the total number of hours the air contaminant source was in operation, i.e., hours per day; and

the average hourly OC and VOC emissions rates for all adhesives employed in this air contaminant source, in pounds per hour, i.e., "d" divided by "e" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions; and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the



preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this emissions unit:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 1.24 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.28 lbs/hour, and the actual average hourly VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.41 pound per hour (daily average) of OC emissions and 1.81 tons per year.

Applicable Compliance Method:



Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.28 pound per hour (daily average) of VOC emissions and 1.24 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**7. P015, Tubs Final Cleaning and Grinding**

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

Final Cleaning and Grinding vented to dust collector AM-11. This operation uses hand-held grinders and cleaning solvent rags for grinding and wipe cleaning of parts.

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

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

None.

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

b)(1)e, d)(2), e)(1), f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  particulate emissions (PE) shall not exceed 0.03 pound per hour and 0.12 ton per year;  organic compound (OC) emissions shall not exceed 0.41 pound per hour and 1.79 tons per year;  volatile organic compound (VOC) emissions shall not exceed 0.17 pound per hour and 0.72 ton per rolling, 12-month period; and  visible particulate emissions shall not exceed 10% opacity as a 6-minute average.
b. OAC rule 3745-17-07	The emission limitation specified by this



Applicable Rules/Requirements

Applicable Emissions Limitations/Control Measures

- c. OAC rule 3745-17-11  
rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  
The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- d. OAC rule 3745-21-07(G)  
See b)(2)a and b)2)(b).
- e. OAC rule 3745-31-05(D)(1)(b)  
See B.2, B.3 and B.4.

Additional Terms and Conditions

This emissions unit shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(C)(5).

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

The permittee shall operate the dust collector (AM-11) whenever this emissions unit is in operation.

The pressure drop across each of the dust collector AM-11 shall be maintained within the range of 0.5 to 2.0 inches of water while the emissions unit is in operation.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each cleaning material employed;



the number of gallons or pounds of each cleaning material employed;

the OC and VOC content of each cleaning material employed, in pounds per gallon or in weight percent;

the daily OC and VOC emissions from all cleaning material(s) employed prior to any credit for recovered cleanup materials, in pounds per day, i.e., the sum of "b" x "c" for each cleaning material employed;

If an emissions credit for recovered cleanup materials is desired, the OC and VOC emissions from the recovered cleanup material during the day may be subtracted from the respective daily VOC and OC emissions calculated above. The OC and VOC emissions from recovered cleanup materials is calculated by the following equation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total number of hours the emissions unit was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all cleaning material(s) employed in this emissions unit, in pounds per hour, i.e. "d" divided by "e" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions; and

VOC emissions during a rolling, 12-month period, in ton/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this air contaminant source:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-07(C)(5).

The permittee shall maintain daily records that document any time periods when the dust collector was not in service while the emissions unit was in operation.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collector (AM-11) while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.



e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 0.72 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.17 lb/hour, and the actual average hourly VOC emissions for each such day.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.41 pound per hour (daily average) of OC emissions and 1.79 tons per year.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.17 pound per hour (daily average) of VOC emissions and 0.72 ton per rolling, 12-month period.

Applicable Compliance Method:



Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

Emission Limitations:

0.03 pound per hour and 0.12 ton per year of particulate emissions (total from dust collector AM-11)

Applicable Compliance Method:

If required by the Ohio EPA, compliance with the allowable particulate emissions limitation shall be determined in accordance with U. S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

Emission Limitations:

10 opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1) or other U. S. EPA approved test method with prior approval from the Ohio EPA.

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.

The permittee agrees to submit an application for a permit modification or a demonstration indicating P015 is exempt from permitting within 90 days of this permit issuance. This request is based on recent inspection findings.



**8. P016, Tubs Department Glue Station**

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

Tubs Department Glue Station. This operation includes adhesive application tools.

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

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

None.

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

b)(1)b, d)(2), e)(1), f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 1.16 pounds per hour and 1.69 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.64 pound per hour and 0.94 ton per rolling, 12-month period.
b. OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.
c. OAC rule 3745-21-07(G)	See b)(2)a and b)(2)b.

**Additional Terms and Conditions**

This emissions unit shall not employ photochemically reactive materials as defined in OAC rule 3745-21-01(1)(5).



On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(2)a.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

- the company identification for each adhesive, sealer, and cleanup material employed;
- the number of gallons and density or pounds of each adhesive employed;
- the number of gallons and density or pounds of each sealer employed;
- the number of gallons and density or pounds of each cleanup material employed;
- the OC and VOC content of each adhesive employed, in pounds per gallon, grams per liter, or in weight percent;
- the OC and VOC content of each sealer employed, in pounds per gallon, grams per liter, or in weight percent;
- the OC and VOC content of each cleanup material employed, in pounds per gallon, grams per liter, or in weight percent;
- the daily OC and VOC emissions from all adhesives employed, in (converted to) pounds per day, i.e., the sum of "b" x "e" for each adhesive employed;
- the daily OC and VOC emissions from all sealers employed, in (converted to) pounds per day, i.e., the sum of "c" x "f" for each sealer employed;



the daily OC and VOC emissions from all cleanup material(s) employed, in (converted to) pounds per day, i.e., the sum of "d" x "g" for each cleanup material employed;

If an emissions credit for recovered cleanup materials is desired, the OC and VOC emissions from the recovered cleanup material during the day may be subtracted from the respective daily VOC and OC emissions calculated above. The OC and VOC emissions from recovered cleanup materials is calculated by the following equation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions, i.e., lbs/day, calculated by the sum of "h" + "l" + "j" for both pollutants.

the total number of hours the air contaminant source was in operation, i.e., hours per day; and

the average hourly OC and VOC emissions rates for all adhesives employed in this air contaminant source, in pounds per hour, i.e., "k" divided by "l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions; and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The permittee shall collect and record the annual OC emissions by the summation of the daily OC emissions rates during a calendar year.

The permittee shall keep the following records on all materials employed in this emissions unit:

the identification of the chemical compound and its physical state; and

for any liquid organic materials, whether or not the material is a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 0.94 ton per rolling, 12-months, and actual rolling, 12-month VOC emissions during for each such month; and

an identification of each day during which the average hourly VOC emissions from this air contaminant source exceeded the limit of 0.64 lbs/hour, and the actual average hourly VOC emissions for each such day.



These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

1.16 pound per hour (daily average) of OC emissions and 1.69 tons per year.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(3).

Emission Limitations:

0.64 pound per hour (daily average) of VOC emissions and 0.94 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1) and d)(2)

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.

The permittee agrees to submit an application for a permit modification or a demonstration indicating P016 is exempt from permitting within 90 days of this permit issuance. This request is based on recent inspection findings.



**9. R005, Tubs Ground Coat Spray Booth**

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

Tubs Department Enamel Ground Coat Line vented to 3 dust collectors (ET-03, ET-04 and ET-05). This operation includes a spray booth, drying oven, curing furnace, and spotter spray booth.

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

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

None.

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

b)(1)d

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from this emissions unit shall not exceed the following limitations from process operations:</p> <p>particulate emissions (PE) shall not exceed 2.01 pound per hour and 8.80 tons per year from dust collectors ET-03, ET-04 and ET-05; and</p> <p>no outside visible particulate emissions from door(s), window(s), stack(s), and/or vents exhausting the area of the enamel ground coat line.</p> <p>Emissions from the combustion of natural gas in the drying oven and curing furnace shall not exceed the following limitations:</p> <p>PE shall not exceed 0.03 pound per hour</p>



Applicable Rules/Requirements

Applicable Emissions Limitations/Control Measures

and 0.14 ton per year;

organic compound (OC) emissions shall not exceed 0.19 pound per hour and 0.82 ton per year;

volatile organic compound (VOC) emissions shall not exceed 0.09 pound per hour and 0.41 ton per year;

nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 1.70 pounds per hour and 7.45 tons per year;

carbon monoxide (CO) emissions shall not exceed 1.43 pounds per hour and 6.25 tons per year; and

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.01 pound per hour and 0.04 ton per year.

b. OAC rule 3745-17-07

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

c. OAC rule 3745-17-11

The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

d. OAC rule 3745-31-05(D)(1)(b)

See B.2, B.3 and B.4.

Additional Terms and Conditions

None.

c) Operational Restrictions

The permittee shall operate the dust collectors, ET-03, ET-04, and ET-05 (which exhaust inside the facility), whenever this emissions unit is in operation.

The pressure drop across each of the dust collectors (ET-03 and ET-04) shall be maintained within the following ranges while the emissions unit is in operation:

ET-03: 1.5 to 5.0 inches of water

ET-04: 1.0 to 5.0 inches of water.



The permittee shall burn only natural gas in the drying oven and curing furnace serving this emissions unit. The emissions from natural gas combustion are permitted at the potential usage of natural gas in all of the drying ovens contained in this permit.

The panel filter at ET-05 shall be changed weekly.

d) **Monitoring and/or Recordkeeping Requirements**

The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collectors, ET-03 and ET-04, while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

The permittee shall maintain a log for the dust collector identified as ET-05 and shall record each date the panel filter, ET-05, is replaced.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from any door(s), window(s), stack(s), and/or vents in the area of the enamel ground coat line. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

the color of the emissions;

whether the emissions are representative of normal operations;

if the emissions are not representative of normal operations, the cause of the abnormal emissions;

the total duration of any visible emission incident; and

any corrective actions taken to eliminate the visible emissions.

The visible emissions check is not required to be performed by individuals certified to conduct U.S. EPA Reference Method 9 observations.

The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned frequencies for performing the visible emissions checks if operating experience indicates that less frequent visible emissions checks would be sufficient to ensure compliance with the requirements for no visible emissions.

At the end of each year the permittee shall collect and record the total tons of frit coatings applied in this emissions unit, to be used in the annual demonstration of compliance with



the particulate emission limitation from overspray, by applying the annual tons of frit coating employed in the calculation of the estimated emissions contained in f)(1)b.

e) Reporting Requirements

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

2.01 pounds per hour of particulate emissions (total from dust collectors ET-03, ET-04, and ET-05)

Applicable Compliance Method:

This limit represents the estimated controlled potential emissions of this emissions unit, calculated as follows:

Primary booth

$(145 \text{ tubs/hr}) \times (5.2 \text{ lbs coat/tub}) \times (100\%-30\%TE) \times (25\% \text{ to filter}^*) \times (100\%-99.5\% \text{ control for ET-03 and ET-04 and ET-05}) = 0.66 \text{ lbs/hr}$

Spotter booth

$(22 \text{ lbs/hr}) \times (100\%-30\%TE) \times (25\% \text{ to filter}^*) \times (100\%-65\% \text{ control for ET-05}) = 1.35 \text{ lbs/hr}$

Total= primary booth + spotter booth = 0.66 + 1.35 = 2.01 lbs/hr

If required by the Ohio EPA, compliance with the allowable particulate emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

\* it is estimated that a minimum of 75% of the overspray is collected in the reclaim trough

Emission Limitation:

8.80 tons per year of particulate emissions (total from dust collectors ET-03, ET-04, and ET-05)

Applicable Compliance Method:



The annual emission limitation is based on the allowable hourly emission rate (2.01 lb/hr) multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. In order to demonstrate compliance with the annual particulate emission limitation from frit coatings, the following calculation shall be performed at the end of each year:

$$PE = (FC \times 70\% \text{ overspray} \times 25\% \text{ to filter} \times 1\% \text{ lost from filter})$$

where:

PE = total estimated particulate emissions from overspray, in tons of PE per year

FC = total annual frit coating usage in this emissions unit, in tons per year

Emission Limitations, from natural gas combustion:

0.03 pound per hour of particulate emissions;

0.19 pound per hour of OC emissions;

0.09 pound per hour of VOC emissions;

1.70 pound per hour of NO<sub>x</sub> emissions;

1.43 pound per hour of CO emissions; and

0.01 pound per hour of SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factors from "Compilation of Air Pollutant Emission Factors", Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the drying oven and curing furnace (17,000 ft<sup>3</sup>/hr, combined). The emissions factors are 1.9 lbs filterable particulates/mmft<sup>3</sup>, 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>, 11 lbs OC/mmft<sup>3</sup>, 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>, 84 lbs CO/mmft<sup>3</sup>, and 5.5 lbs VOC/mmft<sup>3</sup>. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations, from natural gas combustion:

0.14 ton per year of particulate emissions;

0.82 ton per year of OC emissions;

0.41 ton per year of VOC emissions;

7.45 tons per year of NO<sub>x</sub> emissions;

6.25 tons per year of CO emissions; and



0.04 ton per year of SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitations, compliance will also be shown for the annual emission limitations.

Emission Limitation:

No outside visible particulate emissions from door(s), window(s), stack(s), and/or vents exhausting the area of the enamel ground coat line.

Applicable Compliance Method:

Compliance shall be determined through the weekly (or other approved frequency) visible emissions checks and through visible emission observations performed in accordance 40 CFR Part 60, Appendix A, Method 22.

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**10. R008, FRP Lamination Line #1**

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

Acrylic Parts Fiberglass (FRP) Lamination Line 1, contained within a permanent total enclosure, vented to the Polyad control system (Polyad Preconcentrator and thermal oxidizer). This operation includes a FRP resin coating booth, transition area, and a curing oven.

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

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

d)(7)

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

b)(1)c, c)(1), c)(2), c(3), d)(1), d)(2), d)(3), d)(4), d)(6), e)(1), f)(1)a, f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from the combustion of natural gas in the curing ovens and thermal oxidizer for emissions units R008 and R022, combined, shall not exceed the following:</p> <p>particulate emissions (PE) shall not exceed 0.005 pound per hour and 0.02 ton per year;</p> <p>OC emissions shall not exceed 0.03 pound per hour and 0.14 ton per year;</p> <p>VOC emissions shall not exceed 0.016 pound per hour and 0.07 ton per year;</p> <p>nitrogen oxide (NOx) emissions shall not exceed 0.29 pound per hour and 1.26 tons per year;</p>



Applicable Rules/Requirements

Applicable Emissions Limitations/Control Measures

- b. OAC rule 3745-21-07(G)

carbon monoxide (CO) emissions shall not exceed 0.24 pound per hour and 1.05 tons per year; and

sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.002 pound per hour and 0.008 ton per year.

OC emissions from the cleanup of R008, R022 & P010 combined shall not exceed 1,395 lbs per month.

The control requirement specified by this rule is less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).
- c. OAC rule 3745-31-05(D)(1)(b)

See b)(2)a.

The total emissions for emissions units R008 and R022, combined, shall not exceed the following limitations:

volatile organic compound (VOC) emissions shall not exceed 52.1 pounds per day and 9.5 tons per rolling, 12-month period;

styrene emissions shall not exceed 52.1 pounds per day and 9.5 tons per rolling, 12-month period; and

all styrene emissions shall be captured and vented to the Polyad control system which shall achieve a minimum control efficiency of 93%, by weight.

See B.2, B.3, B.4 and b)(2)b.

Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:



b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

The VOC and styrene emissions limitations are based on a maximum usage of 12,980 pounds per day of a styrene resin having a styrene content of 47%.

c) Operational Restrictions

The Polyad Preconcentrator and thermal oxidizer control systems shall be used whenever this air contaminant source is in operation.

The average combustion temperature within the thermal incinerator, for any 3-hour block of time the air contaminant source is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test which demonstrated compliance with all applicable limitations.

Stack testing performed on November 3, 2005 demonstrated the polyad control system achieved a control efficiency of 93%, by weight. The average combustion temperature within the thermal incinerator during the November 3, 2005 testing was 1,350 degrees Fahrenheit.

This emissions unit shall be totally enclosed such that all emissions are captured for venting to the Polyad control system. Compliance with the following criteria, as specified by USEPA Method 204, shall be met by the permittee:

any natural draft opening (NDO) shall be at least four equivalent opening diameters from each VOC emitting point;

the total area of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

the average facial velocity of air through all the NDO's shall be at least 3,600 m/hr (200 fpm); or the differential pressure between the inside and outside of the enclosure shall not be less than 0.007 inch of water;

the direction of air flow through all NDO's shall be into the enclosure; and

all access doors and windows whose areas are not included in "b" and are not included in the calculations or monitoring in "c" shall be closed during routine operation of the process.

The permittee shall burn only natural gas in the curing oven and thermal oxidizer serving this air contaminant source. The emissions from natural gas combustion are permitted at the potential usage of natural gas for air contaminant sources R008 and R022, combined.



d) Monitoring and/or Recordkeeping Requirements

The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the air contaminant source is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

all 3-hour blocks of time (i.e., 12 a.m. to 3 a.m., 3 a.m. to 6 a.m., etc.) during which the average combustion temperature within the thermal oxidizer, when the air contaminant source was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission tests that demonstrated the emissions unit was in compliance; and

a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated air contaminant source(s) was(were) in operation.

The permittee shall install, operate, and maintain monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall record and maintain the following information on a daily basis:

the difference in pressure between the permanent total enclosure and the surrounding area(s); and

a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

The permittee shall collect and record the following information on a daily basis for each material employed in air contaminant sources R008 and R022, combined:

the company identification for each process resin, catalyst and cleanup material employed;

the number of gallons and density or pounds of each process resin employed;

the number of gallons and density or pounds of each catalyst employed;

the number of gallons and density or pounds of each cleanup material employed at P010, R008 and R022 combined;

the VOC content of each process resin employed, in pounds per gallon or in weight percent;



the VOC content of each catalyst employed, in pounds per gallon or in weight percent;

the VOC and OC content of each cleanup material employed, in pounds per gallon or in weight percent;

the styrene content of each process resin employed, in pounds per gallon or in weight percent;

the daily uncontrolled styrene emissions, in pounds per day, i.e., the sum of "b"(in pounds or converted to tons) of all process resins applied, times the emission factor (EF)\*, in pounds of styrene emitted per pound or ton of process resins. The EF is taken from Table 1 of Subpart WWWW of 40 CFR Part 63 for a nonatomized mechanical resin application using a nonvapor-suppressed resin, i.e.,  $EF = [(0.157 \times \% \text{ styrene}) - 0.0165] \times 2000$ ;

\* An alternative uncontrolled styrene emission factor may be used if it is determined more appropriate and approved by the Ohio EPA.

the daily control styrene emissions, in pounds per day, calculated by multiplying the uncontrolled styrene emissions, in pounds per day, by  $(1 - 0.93)$ . 0.93 represents the 93% control provided by the polyad system.

the daily uncontrolled VOC emissions from all catalysts, in pounds per day, calculated by the sum of "c" x "f" for each catalyst employed;

the daily controlled VOC emissions from all catalysts, in pounds per day, calculated by multiplying the uncontrolled VOC emissions, in pounds per day, by  $(1 - 0.93)$ . 0.93 represents the 93% control provided by the polyad system.

the daily VOC and OC emissions from all cleanup materials employed at P010, R008 and R022 combined, prior to any credit for recovered cleanup materials, in (or converted to) pounds per day, i.e., the sum of "d" x "g" for each cleanup material employed;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials is calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total daily VOC emissions, in lbs VOC/day, i.e., sum of "j" + "l" + "m"(if the cleanup material contains VOC).

The permittee shall collect and record the following information, including the calculation, on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions, as recorded in d)(5)n;



total styrene emissions, in lbs/month, calculated as the sum of the daily styrene emissions, as recorded in d)(5)j;

OC emissions, in lbs/month, from the cleanup materials calculated as the sum of the daily OC emissions from cleanup material usage, as recorded in d)(5)m.

VOC emissions on a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months; and

Styrene emissions on a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months.

Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F)(4)(b), was not necessary because the air contaminant sources (R008 & R022) were evaluated during the review of PTI#02-188111, where a larger styrene emissions rate was provided. The emissions rate of 3.99 lbs styrene per hour did not exceed the Maximum Acceptable Ground\_Level Concentration (MAGLC) for styrene. The emissions rate in this permit (52.1 lbs styrene per day or 2.17 lbs styrene per hour) is lower than the rate of 3.99 lbs styrene per hour.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of all 3-hour blocks of time (i.e., 12 a.m. to 3 a.m., 3 a.m. to 6 a.m., etc.) during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above;

an identification of all periods of time during which the permanent total enclosure was either not maintained at the required differential pressure or average facial velocity, through each NDO;

an identification of each month during which the VOC emissions from R008 & R022 combined exceeded 52.1 lbs/day, and the actual daily VOC emissions for each such day;

an identification of each month during which the styrene emissions from R008 & R022 combined exceeded 52.1 lbs/day, and the actual daily styrene emissions for each such day;

an identification of each month during which the VOC emissions from R008 & R022 combined exceeded 9.5 tons per rolling, 12-months, and the actual rolling, 12-month VOC emissions during each such month; and



an identification of each month during which the styrene emissions from R008 & R022 combined exceeded 9.5 tons per rolling, 12-months, and the actual rolling, 12-month styrene emissions during each such month.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

52.1 lbs VOC per day, and 9.5 tons VOC per rolling, 12-months for emissions units R008 and R022 combined

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(5)m and d)(6)d.

Emission Limitations:

52.1 lbs styrene/day and 9.5 tons styrene per rolling, 12-months months for emissions units R008 and R022 combined

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(5)j and d)(6)e.

Emission Limitations:

Organic compound (OC) emissions from the cleanup of P010, R008 & R022 combined shall not exceed 1,395 lbs per month.



Applicable Compliance Method:

Compliance may be demonstrated through the record keeping requirements specified in d)(1)(j) under P010, and d)(5)m under R008 & R022.

Emission Limitation:

All styrene emissions shall be captured by a total enclosure providing 100% capture, and vented to the Polyad control system which shall achieve a minimum control efficiency of 93%, by weight.

Applicable Compliance Method:

100% capture and the control efficiency requirement of 93%, by weight, were demonstrated during testing performed on November 3, 2005. Re-testing may be required at a future date upon permit renewal.

Emission Limitations from emissions units R008 and R022, combined, from natural gas combustion:

- 0.005 pound per hour of particulate emissions;
- 0.03 pound per hour of OC emissions;
- 0.016 pound per hour of VOC emissions;
- 0.29 pound per hour of NO<sub>x</sub> emissions;
- 0.24 pound per hour of CO emissions; and
- 0.002 pound per hour of SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factor from "Compilation of Air Pollutant Emission Factors," Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the oven (1,800 ft<sup>3</sup>/hr, combined). The emissions factors are 1.9 lbs filterable particulates/mmft<sup>3</sup>, 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>, 11 lbs OC/mmft<sup>3</sup>, 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>, 84 lbs CO/mmft<sup>3</sup>, and 5.5 lbs VOC/mmft<sup>3</sup>. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations from emissions units R008 and R022, combined, from natural gas combustion:

- 0.02 ton per year of particulate emissions;
- 0.14 ton per year of OC emissions;
- 0.07 ton per year of VOC emissions;



1.26 tons per year of NO<sub>x</sub> emissions;  
1.05 tons per year of CO emissions; and  
0.008 ton per year of SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitations, compliance will also be shown for the annual emission limitations.

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**11. R009, Tubs Department Americast I Primer Booth**

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

Tubs Department Americast I Primer Booth. This operation includes a primer spray booth and a curing oven.

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

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

d)(5), d)(6), d)(7), d)(8), e)(1)e.

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

b)(1)b, d)(4), e)(1)a through e)(1)d, f)(1)b, f)(1)d

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Volatile organic compound (VOC) emissions from the booth shall not exceed 158.0 lbs per day.
b. OAC rule 3745-31-05(D)(1)(b)	Toluene emissions from the booth shall not exceed 30.4 lbs per day.
c. OAC rule 3745-17-07(A)	See B.2, B.3, B.4, b)(2)a and b)(2)b.
d. OAC rule 3745-17-10(B)(1)	Visible particulate emissions from the booth and curing oven shall not exceed 20% opacity as a 6-minute average.
e. OAC rule 3745-17-11(B)(1)	Particulate emissions (PE) from the curing oven exhaust shall not exceed 0.020 lb per mmBtu of actual heat input. PE from the booth shall not exceed 0.551 lb per hour.



#### Additional Terms and Conditions

Volatile organic compound (VOC) emissions from this air contaminant source shall not exceed 28.83 tons per rolling, 12-months.

(The VOC emissions limitations are based on a maximum coating usage of 162 lbs per day or 59,130 lbs per 12-months, having a total VOC weight fraction of 0.975.)

Toluene emissions from this air contaminant source shall not exceed 5.54 tons per rolling, 12-months.

(The toluene emissions limitations are based on a maximum coating usage of 162 lbs per day or 59,130 lbs per 12-months, having a total toluene weight fraction of 0.1875).

Particulate emissions from this air contaminant source are considered to be minimal.

c) Operational Restrictions

The permittee shall operate the dust filters whenever this air contaminant source is in operation.

The permittee shall burn only natural gas in the curing oven serving this air contaminant source.

The maximum burner capacity of the curing oven shall not exceed 0.5 mmBtu/hr.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the air contaminant source was in operation.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

The permittee shall collect and record the following information on a daily basis for each material employed in this air contaminant source:

the company identification for each coating and cleanup material;

the number of gallons and density or pounds of each coating, as applied

the number of gallons of cleanup material employed;

the VOC content of the coating(s) employed, in pounds per gallon;

the VOC content of the coating(s) as applied, excluding water and exempt solvents;

the VOC and OC content of the cleanup material employed, in pounds per gallon;

the daily VOC emissions from the coatings, in pounds per day, i.e., the sum of "b" x "d" for each coating applied;



the daily VOC and OC emissions from all cleanup materials employed, prior to any credit for recovered cleanup materials, in (or converted to) pounds per day, i.e., the sum of "c" x "f" of each cleanup material employed;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total daily VOC emissions, in lbs VOC/day, i.e., sum of "g" + "h" (if the cleanup material contains VOC);

the toluene content of the coating(s) employed, in pounds per gallon or in weight percent; and

the total toluene emissions, in lbs toluene/day, i.e., sum of "b" x "j" for each coating applied.

The permittee shall collect and record the following information on a monthly basis:

total VOC and OC emissions, calculated as the sum of emissions from all coatings and cleanup materials employed at this air contaminant source each day during the month;

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000;

total toluene emissions, calculated as the sum of emissions from all coatings employed at this air contaminant source each day during the month; and

toluene emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's toluene emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The federally enforceable permit-to-install and operate (FEPTIO) application for this air contaminant source was evaluated based on the actual materials and the design parameters of the air contaminant source's exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this air contaminant source for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant 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 result 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:

The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound emitted from the air contaminant source, (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):

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

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 limit to an equivalent 8-hour TLV.

The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the air contaminant source, 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):

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

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

Toxic Contaminant: Toluene

TLV (ug/m<sup>3</sup>): 75,360

Maximum Hourly Emission Rate (lbs/hr): 1.27

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 230.95

MAGLC (ug/m<sup>3</sup>): 1,794.29

The permittee has demonstrated that emissions of toluene from this air contaminant source is 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).

Prior to making any physical changes to or changes in the method of operation of the air contaminant source, 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 change(s) 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:

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;

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

physical changes to the emissions unit(s) or its/their 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.

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 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.);

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);

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

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.



The permittee shall maintain a record of any change made to a 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 ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each month during which the VOC emissions from this air contaminant source exceeded 28.83 tons per rolling, 12-months, and the actual rolling, 12-month VOC emissions during each such month;

an identification of each day during which the daily VOC emissions from this air contaminant source exceeded the daily limit of 158.0 lbs/day, and the actual daily VOC emissions for each such day;

an identification of each month during which the toluene emissions from this air contaminant source exceeded 5.54 tons per rolling, 12-months, and the actual rolling, 12-month toluene emissions during each such month;

an identification of each day during which the daily toluene emissions from this air contaminant source exceeded the daily limit of 30.4 lbs/day, and the actual daily toluene emissions for each such day; and

any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, air contaminant source, or the exhaust stack have been made, a statement to this effect.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarter.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements



Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

158.0 lbs VOC/day

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(3)i.

Emission Limitation:

28.83 tons VOC/rolling, 12-months

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(4)a.

Emission Limitation:

30.4 lbs toluene/day

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(3)k.

Emission Limitation:

5.54 tons toluene/rolling, 12-months

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(4)c.

Emission Limitation:

Visible particulate emissions from the booth and curing oven shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1) or other U.S. EPA approved test method with prior approval from the Ohio EPA.

Emission Limitation:



Particulate emissions (PE) from the curing oven exhaust shall not exceed 0.020 lb per mmBtu of actual heat input.

Applicable Compliance Method:

If required, compliance shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(9).

Emission Limitation:

PE from the booth shall not exceed 0.551 lb per hour.

Applicable Compliance Method:

If required, compliance shall be determined through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**12. R012, Americast I System 1 Clamps #1 and #2**

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

Americast I System 1 Clamps 1 and 2.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.35 pound per hour and 1.53 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.05 pound per hour and 0.22 tons per rolling, 12-month period.
b.	OAC rule 3745-21-07(G)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See b)(2)a.
c.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.



Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed at this air contaminant source:

the company identification for each process resin, mold release agent, and mold cleaner employed;

the number of gallons or pounds of each process resin employed;

the number of gallons or pounds of each mold release agent employed;

the number of gallons or pounds of the/each mold cleaner employed;

the OC, VOC, and 4,4'-methylene diphenyl diisocyanate (MDI) content of each process resin employed, in pounds per gallon or in weight percent;

the OC and VOC content of each mold release agent employed, in pounds per gallon or in weight percent;

the OC and VOC content of the/each mold cleaner, in pounds per gallon or in weight percent;

if any process resin contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins employed, in pounds per day, i.e., the sum of "b" x ("e"-MDI content) for each process resin;



the daily OC and VOC emissions from all mold release agents employed, in pounds per day, i.e., the sum of "c" x "f" for each mold release agent applied;

the daily OC and VOC emissions from all mold cleaner(s) employed prior to any credit for recovered materials, in pounds per day, i.e., the sum of "d" x "g" for each mold cleaner applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions from all materials applied during the day, i.e., sum of "h" + "i" + "j" above;

the total number of hours the emissions unit was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all materials employed in this emissions unit, in pounds per hour, i.e., "k"/"l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions; and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

the monthly MDI emissions, estimated using the calculation of emissions from the Alliance for the Polyurethanes Industry "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry (1999)", and substituting the variables for the average process temperature in degrees Kelvin and the monthly volume of displaced air (ft<sup>3</sup>/month):

$$L_{pk} = V_{air} \times (1/359) \times (273/T_{proc}) \times (VP_{mdi}/760) \times M_w \times K_{mdi}$$

$L_{pk}$  = emissions (lb/mo)

$V_{air}$  = monthly volume of displaced air (ft<sup>3</sup>/mo)

$T_{proc}$  = process temperature in degrees K

$VP_{mdi}$  = vapor pressure of MDI (mm Hg)

$M_w$  = molecular weight of MDI, 254.38



$K_{mdi}$  = adjustment factor to the VP that is a function of the MDI concentration in the feedstock, assume 1.0

the rolling MDI emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's MDI emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each day during which the average VOC emissions from the emissions unit exceeded 0.05 pound per hour and the actual average hourly VOC emissions for each such day; and

an identification of each month during which the rolling, 12-month VOC emissions from this emissions unit exceeded 0.22 tons.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.35 pound per hour (daily average) and 1.53 tons per year of OC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

Emission Limitations:

0.05 pound per hour (daily average) and 0.22 ton per rolling, 12-month period of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**13. R013, Americast I System 2 Clamps #3 and #4**

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

Americast I System 2 Clamps 3 and 4.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.35 pound per hour and 1.53 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.05 pound per hour and 0.22 ton per rolling, 12-month period.
b.	OAC rule 3745-21-07(G)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See b)(2)a.
c.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.



Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed at air contaminant source:

the company identification for each process resin, mold release agent, and mold cleaner employed;

the number of gallons or pounds of each process resin employed;

the number of gallons or pounds of each mold release agent employed;

the number of gallons or pounds of the/each mold cleaner employed;

the OC, VOC, and 4,4'-methylene diphenyl diisocyanate (MDI) content of each process resin employed, in pounds per gallon or in weight percent;

the OC and VOC content of each mold release agent employed, in pounds per gallon or in weight percent;

the OC and VOC content of the/each mold cleaner, in pounds per gallon or in weight percent;

if any process resin contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins employed, in pounds per day, i.e., the sum of "b" x ("e"-MDI content) for each process resin;



the daily OC and VOC emissions from all mold release agents employed, in pounds per day, i.e., the sum of "c" x "f" for each mold release agent applied;

the daily OC and VOC emissions from all mold cleaner(s) employed prior to any credit for recovered materials, in pounds per day, i.e., the sum of "d" x "g" for each mold cleaner applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions from all materials applied during the day, i.e., sum of "h" + "i" + "j" above;

the total number of hours the emissions unit was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all materials employed in this emissions unit, in pounds per hour, i.e., "k"/"l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

the monthly MDI emissions, estimated using the calculation of emissions from the Alliance for the Polyurethanes Industry "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry (1999)", and substituting the variables for the average process temperature in degrees Kelvin and the monthly volume of displaced air (ft<sup>3</sup>/month):

$$L_{pk} = V_{air} \times (1/359) \times (273/T_{proc}) \times (VP_{mdi}/760) \times M_w \times K_{mdi}$$

$L_{pk}$  = emissions (lb/mo)

$V_{air}$  = monthly volume of displaced air (ft<sup>3</sup>/mo)

$T_{proc}$  = process temperature in degrees K

$VP_{mdi}$  = vapor pressure of MDI (mm Hg)

$M_w$  = molecular weight of MDI, 254.38

$K_{mdi}$  = adjustment factor to the VP that is a function of the MDI concentration in the feedstock, assume 1.0



the rolling MDI emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's MDI emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each day during which the average VOC emissions from the emissions unit exceeded 0.05 pound per hour and the actual average hourly VOC emissions for each such day; and

an identification of each month during which the rolling, 12-month VOC emissions from this emissions unit exceeded 0.22 tons.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.35 pound per hour (daily average) and 1.53 tons per year of OC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

Emission Limitations:



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

0.05 pound per hour (daily average) and 0.22 ton per rolling, 12-month period of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**14. R014, Americast II System 3 Clamps #5 and #6**

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

Americast II System 3 Clamps 5 and 6.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.53 pound per hour and 2.32 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.03 pound per hour and 0.13 ton per rolling, 12-month period.
b.	OAC rule 3745-21-07(G)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See b)(2)a.
c.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.



Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed at air contaminant source:

the company identification for each process resin, mold release agent, and mold cleaner employed;

the number of gallons or pounds of each process resin employed;

the number of gallons or pounds of each mold release agent employed;

the number of gallons or pounds of the/each mold cleaner employed;

the OC, VOC, and 4,4'-methylene diphenyl diisocyanate (MDI) content of each process resin employed, in pounds per gallon or in weight percent;

the OC and VOC content of each mold release agent employed, in pounds per gallon or in weight percent;

the OC and VOC content of the/each mold cleaner, in pounds per gallon or in weight percent;

if any process resin contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins employed, in pounds per day, i.e., the sum of "b" x ("e"-MDI content) for each process resin;



the daily OC and VOC emissions from all mold release agents employed, in pounds per day, i.e., the sum of "c" x "f" for each mold release agent applied;

the daily OC and VOC emissions from all mold cleaner(s) employed prior to any credit for recovered materials, in pounds per day, i.e., the sum of "d" x "g" for each mold cleaner applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions from all materials applied during the day, i.e., sum of "h" + "i" + "j" above;

the total number of hours the emissions unit was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all materials employed in this emissions unit, in pounds per hour, i.e., "k"/"l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

the monthly MDI emissions, estimated using the calculation of emissions from the Alliance for the Polyurethanes Industry "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry (1999)", and substituting the variables for the average process temperature in degrees Kelvin and the monthly volume of displaced air (ft<sup>3</sup>/month):

$$L_{pk} = V_{air} \times (1/359) \times (273/T_{proc}) \times (VP_{mdi}/760) \times M_w \times K_{mdi}$$

$L_{pk}$  = emissions (lb/mo)

$V_{air}$  = monthly volume of displaced air (ft<sup>3</sup>/mo)

$T_{proc}$  = process temperature in degrees K

$VP_{mdi}$  = vapor pressure of MDI (mm Hg)

$M_w$  = molecular weight of MDI, 254.38

$K_{mdi}$  = adjustment factor to the VP that is a function of the MDI concentration in the feedstock, assume 1.0



the rolling MDI emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's MDI emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each day during which the average VOC emissions from the emissions unit exceeded 0.03 pound per hour and the actual average hourly VOC emissions for each such day; and

an identification of each month during which the rolling, 12-month VOC emissions from this emissions unit exceeded 0.13 tons.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.53 pound per hour (daily average) and 2.32 tons per year of OC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

Emission Limitations:



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

0.03 pound per hour (daily average) and 0.13 ton per rolling, 12-month period of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**15. R015, Americast II System 4 Clamps #7 and #9**

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

Americast II System 4 Clamps 7 and 9.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.53 pound per hour and 2.32 tons per year; and  volatile organic compound (VOC) emissions shall not exceed 0.03 pound per hour and 0.13 ton per rolling, 12-month period.
b.	OAC rule 3745-21-07(G)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See b)(2)a.
c.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.



Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed at air contaminant source:

the company identification for each process resin, mold release agent, and mold cleaner employed;

the number of gallons or pounds of each process resin employed;

the number of gallons or pounds of each mold release agent employed;

the number of gallons or pounds of the/each mold cleaner employed;

the OC, VOC, and 4,4'-methylene diphenyl diisocyanate (MDI) content of each process resin employed, in pounds per gallon or in weight percent;

the OC and VOC content of each mold release agent employed, in pounds per gallon or in weight percent;

the OC and VOC content of the/each mold cleaner, in pounds per gallon or in weight percent;

if any process resin contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins employed, in pounds per day, i.e., the sum of "b" x ("e"-MDI content) for each process resin;



the daily OC and VOC emissions from all mold release agents employed, in pounds per day, i.e., the sum of "c" x "f" for each mold release agent applied;

the daily OC and VOC emissions from all mold cleaner(s) employed prior to any credit for recovered materials, in pounds per day, i.e., the sum of "d" x "g" for each mold cleaner applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions from all materials applied during the day, i.e., sum of "h" + "i" + "j" above;

the total number of hours the emissions unit was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all materials employed in this emissions unit, in pounds per hour, i.e., "k"/"l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions;

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

the monthly MDI emissions, estimated using the calculation of emissions from the Alliance for the Polyurethanes Industry "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry (1999)", and substituting the variables for the average process temperature in degrees Kelvin and the monthly volume of displaced air (ft<sup>3</sup>/month):

$$L_{pk} = V_{air} \times (1/359) \times (273/T_{proc}) \times (VP_{mdi}/760) \times M_w \times K_{mdi}$$

$L_{pk}$  = emissions (lb/mo)

$V_{air}$  = monthly volume of displaced air (ft<sup>3</sup>/mo)

$T_{proc}$  = process temperature in degrees K

$VP_{mdi}$  = vapor pressure of MDI (mm Hg)

$M_w$  = molecular weight of MDI, 254.38

$K_{mdi}$  = adjustment factor to the VP that is a function of the MDI concentration in the feedstock, assume 1.0



the rolling MDI emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's MDI emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each day during which the average VOC emissions from the emissions unit exceeded 0.03 pound per hour and the actual average hourly VOC emissions for each such day; and

an identification of each month during which the rolling, 12-month VOC emissions from this emissions unit exceeded 0.13 tons.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.53 pound per hour (daily average) and 2.32 tons per year of OC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

Emission Limitations:



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

0.03 pound per hour (daily average) and 0.13 ton per rolling, 12-month period of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(1).

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**16. R019, Smallware Enamel Ground Coating Line**

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

Smallware Department Enamel Ground Coat Line vented to 1 dust collector. This operation includes a spray booth, drying oven, and curing furnace.

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

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

None.

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

b)(1)d

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from this emissions unit shall not exceed the following limitations from process operations:</p> <p>particulate emissions (PE) shall not exceed 0.47 pound per hour and 2.07 tons per year from dust collector ES-07;</p> <p>visible particulate emissions shall not exceed 10% opacity as a 6-minute average; and</p> <p>Emissions from the combustion of natural gas in the drying oven and curing furnace shall not exceed the following limitations:</p> <p>PE shall not exceed 0.01 pound per hour and 0.05 ton per year;</p> <p>organic compound (OC) emissions shall</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>not exceed 0.06 pound per hour and 0.27 ton per year;</p> <p>volatile organic compound (VOC) emissions shall not exceed 0.03 pound per hour and 0.13 ton per year;</p> <p>nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 0.56 pound per hour and 2.43 tons per year;</p> <p>carbon monoxide (CO) emissions shall not exceed 0.47 pound per hour and 2.04 tons per year; and</p> <p>sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.0035 pound per hour and 0.012 ton per year.</p> <p>See b)(2)a</p>
b.	OAC rule 3745-17-07	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.

**Additional Terms and Conditions**

None.

**c) Operational Restrictions**

The permittee shall operate the dust collector (ES-07) whenever this emissions unit is in operation.

The pressure drop across the dust collector (ES-07) shall be maintained within the range of 1.0 to 6.0 inches of water while the emissions unit is in operation.

The permittee shall burn only natural gas in the drying oven and curing furnace serving this emissions unit. The emissions from natural gas combustion are permitted at the potential usage of natural gas in all of the drying ovens contained in this permit.



d) Monitoring and/or Recordkeeping Requirements

The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across the dust collector (ES-07) while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across the dust collector on a daily basis.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

At the end of each year the permittee shall collect and record the total tons of frit coatings applied in this emissions unit, to be used in the annual demonstration of compliance with the particulate emission limitation from overspray, by applying the annual tons of frit coating employed in the calculation of the estimated emissions contained in f).

e) Reporting Requirements

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provide by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

0.47 pound per hour of particulate emissions (total from dust collector ES-07)

Applicable Compliance Method:

This limit represents the estimated controlled potential emissions of this emissions unit, calculated as follows:

$$(90 \text{ parts/hr}) \times (3.0 \text{ lbs coat/part}) \times (100\% - 30\% \text{TE}) \times (25\% \text{ to filter}^*) \times (100\% - 99.0\% \text{ control for ES-07}) = 0.47 \text{ lbs/hr}$$

If required by the Ohio EPA, compliance with the allowable particulate emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.

\* it is estimated that a minimum of 75% of the overspray is collected in the reclaim trough

Emission Limitation:



2.07 tons per year of particulate emissions (total from dust collector ES-07)

Applicable Compliance Method:

The annual emission limitation is based on the allowable hourly emission rate (0.47 lb/hr) multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. In order to demonstrate compliance with the annual particulate emission limitation from frit coatings, the following calculation shall be performed at the end of each year:

$$PE = (FC \times 70\% \text{ overspray} \times 25\% \text{ to filter} \times 1\% \text{ lost from filter})$$

where:

PE = total estimated particulate emissions from overspray, in tons of PE per year

FC = total annual frit coating usage in this emissions unit, in tons per year

Emission Limitations, from natural gas combustion:

- 0.01 pound per hour of particulate emissions;
- 0.06 pound per hour of OC emissions;
- 0.03 pound per hour of VOC emissions;
- 0.56 pound per hour of NO<sub>x</sub> emissions;
- 0.47 pound per hour of CO emissions; and
- 0.0035 pound per hour SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factors from "Compilation of Air Pollutant Emission Factors", Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the drying oven and curing furnace. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations, from natural gas combustion:

- 0.05 ton per year of particulate emissions;
- 0.27 ton per year of OC emissions;
- 0.13 ton per year of VOC emissions;
- 2.43 tons per year of NO<sub>x</sub> emissions;
- 2.04 tons per year of CO emissions; and
- 0.012 ton per year SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

emission limitations, compliance will also be shown for the annual emission limitations.

Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1) or other U.S. EPA approved test method with prior approval from the Ohio EPA.

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**17. R020, Tubs Finish Coating Line**

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

Tubs Department Finish Coat Line vented to 2 dust collectors. This operation includes a spray booth, drying oven, and spotter spray booth.

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

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

None.

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

b)(1)d

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from this emissions unit shall not exceed the following limitations from process operations:</p> <p>particulate emissions (PE) shall not exceed 0.61 pound per hour and 2.67 tons per year from dust collectors ET-01 and ET-02; and</p> <p>visible particulate emissions shall not exceed 10% opacity as a 6-minute average.</p> <p>Emissions from the combustion of natural gas in the drying oven and curing furnace shall not exceed the following limitations:</p> <p>PE shall not exceed 0.02 pound per hour and 0.10 ton per year;</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>organic compound (OC) emissions shall not exceed 0.12 pound per hour and 0.54 ton per year;</p> <p>volatile organic compound (VOC) emissions shall not exceed 0.06 pound per hour and 0.27 ton per year;</p> <p>nitrogen oxide (NO<sub>x</sub>) emissions shall not exceed 1.13 pounds per hour and 4.95 tons per year;</p> <p>carbon monoxide (CO) emissions shall not exceed 0.95 pound per hour and 4.16 tons per year; and</p> <p>sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.01 pound per hour and 0.03 ton per year.</p>
b.	OAC rule 3745-17-07	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
c.	OAC rule 3745-17-11	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
d.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.

**Additional Terms and Conditions**

None.

**c) Operational Restrictions**

The permittee shall operate the dust collectors (ET-01 and ET-02) whenever this emissions unit is in operation.

The pressure drop across each of the dust collectors (ET-01 and ET-02) shall be maintained within the following ranges while the emissions unit is in operation:

ET-01: 1.5 to 6.0 inches of water

ET-02: 1.0 to 5.0 inches of water.

The permittee shall burn only natural gas drying oven and curing furnace serving this emissions unit. The emissions from natural gas combustion are permitted at the potential usage of natural gas in all of the drying ovens contained in this permit.



d) Monitoring and/or Recordkeeping Requirements

The permittee shall maintain daily records that document any time periods when the dust collectors were not in service while the emissions unit was in operation.

The permittee shall properly operate and maintain equipment to monitor the pressure drop across each of the dust collectors (ET-01 and ET-02) while the emissions unit is in operation. The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each of the dust collectors on a daily basis.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

At the end of each year the permittee shall collect and record the total tons of frit coatings applied in this emissions unit, to be used in the annual demonstration of compliance with the particulate emission limitation from overspray, by applying the annual tons of frit coating employed in the calculation of the estimated emissions contained in f).

e) Reporting Requirements

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitation:

0.61 pound per hour of particulate emissions (total from dust collectors ET-01 and ET-02)

Applicable Compliance Method:

This limit represents the estimated controlled potential emissions of this emissions unit, calculated as follows:

$$(145 \text{ tubs/hr}) \times (4.0 \text{ lbs coat/tub}) \times (100\%-30\%TE) \times (25\% \text{ to filter}^*) \times (100\%-99.5\% \text{ control for ET-01}) = 0.51 \text{ lbs/hr}$$

$$(145 \text{ tubs/hr}) \times (0.2 \text{ lbs coat/tub}) \times (100\%-30\%TE) \times (100\%-99.5\% \text{ control for ET-02}) = 0.10 \text{ lbs/hr}$$

If required by the Ohio EPA, compliance with the allowable particulate emission limitation shall be determined in accordance with U.S. EPA Reference Methods 1 through 5 of 40 CFR Part 60, Appendix A.



\* it is estimated that a minimum of 75% of the overspray is collected in the reclaim trough

Emission Limitation:

2.67 tons per year of particulate emissions (total from dust collectors ET-01 and ET-02)

Applicable Compliance Method:

The annual emission limitation is based on the allowable hourly emission rate (0.61 lb/hr) multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. In order to demonstrate compliance with the annual particulate emission limitation from frit coatings, the following calculation shall be performed at the end of each year:

$$PE = (FC \times 70\% \text{ overspray} \times 25\% \text{ to filter} \times 1\% \text{ lost from filter})$$

where:

PE = total estimated particulate emissions from overspray, in tons of PE per year

FC = total annual frit coating usage in this emissions unit, in tons per year

Emission Limitations, from natural gas combustion:

- 0.02 pound per hour of particulate emissions;
- 0.12 pound per hour of OC emissions;
- 0.06 pound per hour of VOC emissions;
- 1.13 pound per hour of NO<sub>x</sub> emissions;
- 0.95 pound per hour of CO emissions; and
- 0.01 pound per hour of SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factors from "Compilation of Air Pollutant Emission Factors", Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the drying oven and curing furnace. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations, from natural gas combustion:

- 0.10 ton per year period of particulate emissions;



0.54 ton per year of OC emissions;  
0.27 ton per year of VOC emissions;  
4.95 tons per year of NO<sub>x</sub> emissions;  
4.16 tons per year of CO emissions; and  
0.03 ton per year of SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitations, compliance will also be shown for the annual emission limitations.

Emission Limitation:

10% opacity, as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with Method 9 of 40 CFR Part 60, Appendix A, using the methods and procedures specified in OAC rule 3745-17-03(B)(1) or other U.S. EPA approved test method with prior approval from the Ohio EPA.

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to\_install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**18. R022, FRP Lamination Line #2**

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

Acrylic Parts Fiberglass (FRP) Lamination Line 2, contained within a permanent total enclosure, vented to the Polyad control system (Polyad Preconcentrator and thermal oxidizer). This operation includes a FRP resin coating booth, transition area, and a curing oven.

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

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

d)(7)

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

b)(1)c, c)(1), c)(2), c(3), d)(1), d)(2), d)(3), d)(4), d)(6), e)(1), f)(1)a, f)(1)b

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	<p>Emissions from the combustion of natural gas in the curing ovens and thermal oxidizer for emissions units R008 and R022, combined, shall not exceed the following:</p> <p>particulate emissions (PE) shall not exceed 0.005 pound per hour and 0.02 ton per year;</p> <p>OC emissions shall not exceed 0.03 pound per hour and 0.14 ton per year;</p> <p>VOC emissions shall not exceed 0.016 pound per hour and 0.07 ton per year;</p> <p>nitrogen oxide (NOx) emissions shall not exceed 0.29 pound per hour and 1.26 tons per year;</p>



Applicable Rules/Requirements

Applicable Emissions Limitations/Control Measures

- b. OAC rule 3745-21-07(G)
  - carbon monoxide (CO) emissions shall not exceed 0.24 pound per hour and 1.05 tons per year; and
  - sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 0.002 pound per hour and 0.008 ton per year.
  - OC emissions from the cleanup of R008, R022 & P010 combined shall not exceed 1,395 lbs per month.
  - The control requirement specified by this rule is less stringent than the control requirements established pursuant to OAC rule 3745-31-05(A)(3).
- c. OAC rule 3745-31-05(D)(1)(b)
  - See b)(2)a.
  - The total emissions for emissions units R008 and R022, combined, shall not exceed the following limitations:
    - volatile organic compound (VOC) emissions shall not exceed 52.1 pounds per day and 9.5 tons per rolling, 12-month period;
    - styrene emissions shall not exceed 52.1 pounds per day and 9.5 tons per rolling, 12-month period; and
    - all styrene emissions shall be captured and vented to the Polyad control system which shall achieve a minimum control efficiency of 93%, by weight.
  - See B.2, B.3, B.4 and b)(2)b.

Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:



b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

The VOC and styrene emissions limitations are based on a maximum usage of 12,980 pounds per day of a styrene resin having a styrene content of 47%.

c) Operational Restrictions

The Polyad Preconcentrator and thermal oxidizer control systems shall be used whenever this air contaminant source is in operation.

The average combustion temperature within the thermal incinerator, for any 3-hour block of time the air contaminant source is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test which demonstrated compliance with all applicable limitations.

Stack testing performed on November 3, 2005 demonstrated the polyad control system achieved a control efficiency of 93%, by weight. The average combustion temperature within the thermal incinerator during the November 3, 2005 testing was 1,350 degrees Fahrenheit.

This emissions unit shall be totally enclosed such that all emissions are captured for venting to the Polyad control system. Compliance with the following criteria, as specified by USEPA Method 204, shall be met by the permittee:

any natural draft opening (NDO) shall be at least four equivalent opening diameters from each VOC emitting point;

the total area of all NDO's shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;

the average facial velocity of air through all the NDO's shall be at least 3,600 m/hr (200 fpm); or the differential pressure between the inside and outside of the enclosure shall not be less than 0.007 inch of water;

the direction of air flow through all NDO's shall be into the enclosure; and

all access doors and windows whose areas are not included in "b" and are not included in the calculations or monitoring in "c" shall be closed during routine operation of the process.

The permittee shall burn only natural gas in the curing oven and thermal oxidizer serving this air contaminant source. The emissions from natural gas combustion are permitted at the potential usage of natural gas for air contaminant sources R008 and R022, combined.



d) Monitoring and/or Recordkeeping Requirements

The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the combustion temperature within the thermal oxidizer when the air contaminant source is in operation. Units shall be in degrees Fahrenheit. The monitoring and recording devices shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall collect and record the following information for each day:

all 3-hour blocks of time (i.e., 12 a.m. to 3 a.m., 3 a.m. to 6 a.m., etc.) during which the average combustion temperature within the thermal oxidizer, when the air contaminant source was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emission tests that demonstrated the emissions unit was in compliance; and

a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated air contaminant source(s) was(were) in operation.

The permittee shall install, operate, and maintain monitoring devices and a recorder which simultaneously measure and record the pressure inside and outside the permanent total enclosure. The monitoring and recording devices shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

The permittee shall record and maintain the following information on a daily basis:

the difference in pressure between the permanent total enclosure and the surrounding area(s); and

a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.

The permittee shall collect and record the following information on a daily basis for each material employed in air contaminant sources R008 and R022, combined:

the company identification for each process resin, catalyst and cleanup material employed;

the number of gallons and density or pounds of each process resin employed;

the number of gallons and density or pounds of each catalyst employed;

the number of gallons and density or pounds of each cleanup material employed at P010, R008 and R022 combined;

the VOC content of each process resin employed, in pounds per gallon or in weight percent;



the VOC content of each catalyst employed, in pounds per gallon or in weight percent;

the VOC and OC content of each cleanup material employed, in pounds per gallon or in weight percent;

the styrene content of each process resin employed, in pounds per gallon or in weight percent;

the daily uncontrolled styrene emissions, in pounds per day, i.e., the sum of "b"(in pounds or converted to tons) of all process resins applied, times the emission factor (EF)\*, in pounds of styrene emitted per pound or ton of process resins. The EF is taken from Table 1 of Subpart WWWW of 40 CFR Part 63 for a nonatomized mechanical resin application using a nonvapor-suppressed resin, i.e.,  $EF = [(0.157 \times \% \text{ styrene}) - 0.0165] \times 2000$ ;

\* An alternative uncontrolled styrene emission factor may be used if it is determined more appropriate and approved by the Ohio EPA.

the daily control styrene emissions, in pounds per day, calculated by multiplying the uncontrolled styrene emissions, in pounds per day, by  $(1 - 0.93)$ . 0.93 represents the 93% control provided by the polyad system.

the daily uncontrolled VOC emissions from all catalysts, in pounds per day, calculated by the sum of "c" x "f" for each catalyst employed;

the daily controlled VOC emissions from all catalysts, in pounds per day, calculated by multiplying the uncontrolled VOC emissions, in pounds per day, by  $(1 - 0.93)$ . 0.93 represents the 93% control provided by the polyad system.

the daily VOC and OC emissions from all cleanup materials employed at P010, R008 and R022 combined, prior to any credit for recovered cleanup materials, in (or converted to) pounds per day, i.e., the sum of "d" x "g" for each cleanup material employed;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials is calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total daily VOC emissions, in lbs VOC/day, i.e., sum of "j" + "l" + "m"(if the cleanup material contains VOC).

The permittee shall collect and record the following information, including the calculation, on a monthly basis:

total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions, as recorded in d)(5)n;



total styrene emissions, in lbs/month, calculated as the sum of the daily styrene emissions, as recorded in d)(5)j;

OC emissions, in lbs/month, from the cleanup materials calculated as the sum of the daily OC emissions from cleanup material usage, as recorded in d)(5)m.

VOC emissions on a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months; and

Styrene emissions on a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months.

Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute," ORC 3704.03(F)(4)(b), was not necessary because the air contaminant sources (R008 & R022) were evaluated during the review of PTI#02-188111, where a larger styrene emissions rate was provided. The emissions rate of 3.99 lbs styrene per hour did not exceed the Maximum Acceptable Ground\_Level Concentration (MAGLC) for styrene. The emissions rate in this permit (52.1 lbs styrene per day or 2.17 lbs styrene per hour) is lower than the rate of 3.99 lbs styrene per hour.

For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of the other fuel burned in this emissions unit.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of all 3-hour blocks of time (i.e., 12 a.m. to 3 a.m., 3 a.m. to 6 a.m., etc.) during which the average combustion temperature within the thermal incinerator did not comply with the temperature limitation specified above;

an identification of all periods of time during which the permanent total enclosure was either not maintained at the required differential pressure or average facial velocity, through each NDO;

an identification of each month during which the VOC emissions from R008 & R022 combined exceeded 52.1 lbs/day, and the actual daily VOC emissions for each such day;

an identification of each month during which the styrene emissions from R008 & R022 combined exceeded 52.1 lbs/day, and the actual daily styrene emissions for each such day;

an identification of each month during which the VOC emissions from R008 & R022 combined exceeded 9.5 tons per rolling, 12-months, and the actual rolling, 12-month VOC emissions during each such month; and



an identification of each month during which the styrene emissions from R008 & R022 combined exceeded 9.5 tons per rolling, 12-months, and the actual rolling, 12-month styrene emissions during each such month.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

52.1 lbs VOC per day, and 9.5 tons VOC per rolling, 12-months months for emissions units R008 and R022 combined

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(5)m and d)(6)d.

Emission Limitations:

52.1 lbs styrene/day and 9.5 tons styrene per rolling, 12-months months for emissions units R008 and R022 combined

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d)(5)j and d)(6)e.

Emission Limitations:

Organic compound (OC) emissions from the cleanup of P010, R008 & R022 combined shall not exceed 1,395 lbs per month.

Applicable Compliance Method:



Compliance may be demonstrated through the record keeping requirements specified in d)(1)(j) under P010, and d)(5)m under R008 & R022.

b. Emission Limitation:

All styrene emissions shall be captured by a total enclosure providing 100% capture, and vented to the Polyad control system which shall achieve a minimum control efficiency of 93%, by weight.

Applicable Compliance Method:

100% capture and the control efficiency requirement of 93%, by weight, were demonstrated during testing performed on November 3, 2005. Re-testing may be required at a future date upon permit renewal.

Emission Limitations from emissions units R008 and R022, combined, from natural gas combustion:

0.005 pound per hour of particulate emissions;

0.03 pound per hour of OC emissions;

0.016 pound per hour of VOC emissions;

0.29 pound per hour of NO<sub>x</sub> emissions;

0.24 pound per hour of CO emissions; and

0.002 pound per hour of SO<sub>2</sub> emissions.

Applicable Compliance Method:

Compliance with the hourly emission limitations from natural gas combustion may be demonstrated by multiplying the appropriate AP-42 emission factor from "Compilation of Air Pollutant Emission Factors," Tables 1.4-1 and 1.4-2 (7/98) for natural gas, by the maximum hourly natural gas usage rate of the oven (1,800 ft<sup>3</sup>/hr, combined). The emissions factors are 1.9 lbs filterable particulates/mmft<sup>3</sup>, 0.6 lb SO<sub>2</sub>/mmft<sup>3</sup>, 11 lbs OC/mmft<sup>3</sup>, 100 lbs NO<sub>x</sub>/mmft<sup>3</sup>, 84 lbs CO/mmft<sup>3</sup>, and 5.5 lbs VOC/mmft<sup>3</sup>. If required, the permittee shall demonstrate compliance with the hourly emission limitations in accordance with the appropriate U.S. EPA test methods specified in 40 CFR Part 60, Appendix A.

Emission Limitations from emissions units R008 and R022, combined, from natural gas combustion:

0.02 ton per year of particulate emissions;

0.14 ton per year of OC emissions;

0.07 ton per year of VOC emissions;

1.26 tons per year of NO<sub>x</sub> emissions;



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

1.05 tons per year of CO emissions; and

0.008 ton per year of SO<sub>2</sub> emissions.

Applicable Compliance Method:

The annual emission limitations are based on the allowable hourly emission rates multiplied by the maximum possible operating hours (8,760 hrs/yr), and divided by 2,000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitations, compliance will also be shown for the annual emission limitations.

g) **Miscellaneous Requirements**

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.



**19. R023, Americast I Admiral System Clamp #8**

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

Americast I Admiral System Clamp 8.

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

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

None.

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

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

- b) Applicable Emissions Limitations and/or Control Requirements

The specific operations(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. 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)	Emissions from this emissions unit shall not exceed the following limitations:  organic compound (OC) emissions shall not exceed 0.18 pound per hour and 0.77 ton per year; and  volatile organic compound (VOC) emissions shall not exceed 0.03 pound per hour and 0.11 ton per rolling, 12-month period.
b.	OAC rule 3745-21-07(G)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).  See b)(2)a.
c.	OAC rule 3745-31-05(D)(1)(b)	See B.2, B.3 and B.4.



Additional Terms and Conditions

On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)b.

The emission limitations and control requirements from the amended 21-07 rule, and the associated operational restrictions and the monitoring, record keeping, and reporting requirements contained in this permit, shall become federally enforceable on the date the U.S. EPA approves the revised OAC rule 3745-21-07 as a revision to the Ohio State Implementation Plan. The following terms shall become federally enforceable after U.S. EPA approves the rule revision:

None.

c) Operational Restrictions

None.

d) Monitoring and/or Recordkeeping Requirements

The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:

the company identification for each process resin, mold release agent, and mold cleaner employed;

the number of gallons or pounds of each process resin employed;

the number of gallons or pounds of each mold release agent employed;

the number of gallons or pounds of the/each mold cleaner employed;

the OC, VOC, and 4,4'-methylene diphenyl diisocyanate (MDI) content of each process resin employed, in pounds per gallon or in weight percent;

the OC and VOC content of each mold release agent employed, in pounds per gallon or in weight percent;

the OC and VOC content of the/each mold cleaner, in pounds per gallon or in weight percent;

if any process resin contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins employed, in pounds per day, i.e., the sum of "b" x ("e"-MDI content) for each process resin;



the daily OC and VOC emissions from all mold release agents employed, in pounds per day, i.e., the sum of "d" x "g" for each mold release agent applied;

the daily OC and VOC emissions from all mold cleaner(s) employed prior to any credit for recovered materials, in pounds per day, i.e., the sum of "d" x "g" for each mold cleaner applied;

If an emissions credit for recovered cleanup materials is desired, the VOC and OC emissions from recovered cleanup materials during the day may be subtracted from the daily VOC and OC emissions calculated above. The VOC and OC emissions from the recovered cleanup materials are calculated by the following calculation: (amount of cleanup material recovered, in gallons or pounds/day) multiplied by (the OC and VOC content of the recovered cleanup material, as determined from the most recent lab test results from a representative sample of the recovered material).

the total OC and VOC emissions from all materials applied during the day, i.e., sum of "h" + "i" + "j" above;

the total number of hours the air contaminant source was in operation, i.e., hours/day; and

the average hourly OC and VOC emission rates for all materials employed in this emissions unit, in pounds per hour, i.e., "k"/"l" for both pollutants.

The permittee shall collect and record the following information on a monthly basis:

Total VOC emissions, in lbs/month, calculated as the sum of the daily VOC emissions; and

VOC emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's VOC emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

The monthly MDI emissions, estimated using the calculation of emissions from the Alliance for the Polyurethanes Industry "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry (1999)", and substituting the variables for the average process temperature in degrees Kelvin and the monthly volume of displaced air (ft<sup>3</sup>/month):

$$L_{pk} = V_{air} \times (1/359) \times (273/T_{proc}) \times (VP_{mdi}/760) \times M_w \times K_{mdi}$$

$$L_{pk} = \text{emissions (lb/mo)}$$

$$V_{air} = \text{monthly volume of displaced air (ft}^3\text{/mo)}$$

$$T_{proc} = \text{process temperature in degrees K}$$

$$VP_{mdi} = \text{vapor pressure of MDI (mm Hg)}$$

$$M_w = \text{molecular weight of MDI, 254.38}$$



$K_{mdi}$  = adjustment factor to the VP that is a function of the MDI concentration in the feedstock, assume 1.0

the rolling MDI emissions during a rolling, 12-month period, in tons/12-months, calculated by adding the current month's MDI emissions rate to the monthly sums of the preceding eleven calendar months. This sum is then converted to tons, by dividing by 2,000.

e) Reporting Requirements

The permittee shall submit quarterly deviation (excursion) reports that include the following information:

an identification of each day during which the average VOC emissions from the air contaminant source exceeded 0.03 pound per hour and the actual average hourly VOC emissions for each such day; and

an identification of each month during which the rolling, 12-month VOC emissions from this air contaminant source exceeded 0.11 ton.

These quarterly reports shall also include the probable cause of each deviation and the corrective action(s) taken to remedy the deviation(s).

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report which states that no deviations occurred during the quarter.

These reports shall be submitted (i.e., electronically via Air Services) quarterly to the Ohio EPA by January 31, April 30, July 31 and October 31 of each year and shall cover the previous calendar quarters.

Annual Permit Evaluation Report (PER) forms will be mailed to the permittee at the end of the reporting period specified in the Authorization section of this permit. The permittee shall submit the PER in the form and manner provided by the Director by the due date identified in the Authorization section of this permit. The PER shall cover a reporting period of no more than 12 months for each air contaminant source identified in this permit.

f) Testing Requirements

Compliance with the emission limitations in b)(1) and b)(2) of these terms and conditions shall be determined in accordance with the following methods:

Emission Limitations:

0.18 pound per hour (daily average) and 0.77 ton per year of OC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d).



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**

**Permit Number:** P0104854

**Facility ID:** 0215090011

**Effective Date:** 10/27/2009

Emission Limitations:

0.03 pound per hour (daily average) and 0.11 ton per rolling, 12-month period of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in d).

g) Miscellaneous Requirements

The requirements of this Federally Enforceable Permit-to-Install and Operate (FEPTIO) shall supersede the requirements contained in all previous air permits issued for this air contaminant source.