



State of Ohio Environmental Protection Agency

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Columbus, OH 43216-1049

5/15/2009

Joel Pochron  
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: 02-23002  
Permit Type: OAC Chapter 3745-31 Modification  
County: Columbiana

Certified Mail

No	TOXIC REVIEW
No	PSD
No	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.state.oh.us/dapc](http://www.epa.state.oh.us/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.state.oh.us/dapc](http://www.epa.state.oh.us/dapc).

Sincerely,

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: 02-23002  
Permit Type: OAC Chapter 3745-31 Modification  
Issued: 5/15/2009  
Effective: 5/15/2009  
Expiration: 5/15/2014





State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

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Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** 02-23002  
**Facility ID:** 0215090011  
**Effective Date:** 5/15/2009

# Authorization

Facility ID: 0215090011  
Application Number(s): A0002123  
Permit Number: 02-23002  
Permit Description: Chapter 31 revision to permit limits.  
Permit Type: OAC Chapter 3745-31 Modification  
Permit Fee: \$100.00  
Issue Date: 5/15/2009  
Effective Date: 5/15/2009  
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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

**Final Permit-to-Install and Operate**  
**Permit Number:** 02-23002  
**Facility ID:** 0215090011  
**Effective Date:** 5/15/2009

## Authorization (continued)

Permit Number: 02-23002  
Permit Description: Chapter 31 revision to permit limits.

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>R018</b>
Company Equipment ID:	Tool Making Operation
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



State of Ohio Environmental Protection Agency  
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**Final Permit-to-Install and Operate**

**Permit Number: 02-23002**

**Facility ID: 0215090011**

**Effective Date: 5/15/2009**

## **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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number:** 02-23002

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change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

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

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

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

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number: 02-23002**

**Facility ID: 0215090011**

**Effective Date: 5/15/2009**

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



1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
  - a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
    - (1) None.
  - b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
    - (1) None.



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number: 02-23002**

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**Effective Date: 5/15/2009**

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



**1. R018, Tool Making Operation**

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

Tool Making Operation. This operation includes a spray booth and a drying oven, both contained in a permanent total enclosure which vents to the Polyad control system.

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

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

a. d)(7)

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

a. b)(1)(2), c)(1)(2)(3), d)(1)(2)(3)(4)(5)(6), e)(1)(2), f)(1)

b) Applicable Emissions Limitations and/or Control Requirements

(1) 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(D)(1)(b)	Emissions from this emissions unit shall not exceed the following limitations from process operations:  organic compound (OC) emissions shall not exceed 1.28 pounds per day and 0.20 ton per year;  volatile organic compound (VOC) emissions shall not exceed 1.28 pounds per day and 0.20 ton per rolling, 12-month period; and  visible particulate emissions shall not exceed 10% opacity as a 6-minute average.  See b)(2)a, b)(2)b, b)(2)c and b)(2)d.



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>Emissions from the combustion of natural gas in the drying oven shall not exceed the following limitations:</p> <p>filterable particulate emissions (PE) shall not exceed 0.0003 pound per hour and 0.001 ton per year;</p> <p>organic compound (OC) emissions shall not exceed 0.002 pound per hour and 0.01 ton per year;</p> <p>VOC emissions shall not exceed 0.001 pound per hour and 0.004 ton per year;</p> <p>nitrogen oxide (NOx) emissions shall not exceed 0.02 pound per hour and 0.07 ton per year;</p> <p>carbon monoxide (CO) emissions shall not exceed 0.01 pound per hour and 0.06 ton per year; and</p> <p>sulfur dioxide (SO2) emissions shall not exceed 0.0001 pound per hour and 0.0004 ton per year.</p>
b.	OAC rule 3745-17-07	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D)(1)(b).
c.	OAC rule 3745-17-10	The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D)(1)(b).
d.	OAC rule 3745-21-07(G)(2)	<p>The emission limitations required by this applicable rule are less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(D)(1)(b).</p> <p>See b)(2)e.</p>

(2) Additional Terms and Conditions

- a. 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.



- b. The styrene emissions from this emissions unit shall not exceed 1.28 lbs per day.
  - c. The total emissions from this emissions unit R018, and all other emissions units at the facility (K001, P010, P011, P012, P013, P014, P015, P016, R005, R008, R009, R012, R013, R014, R015, R018, R019, R020, R022 and R023) shall not exceed the following emission limitations for any rolling, 12-month period:
    - i. 73.18 tons of VOC;
    - ii. 9.95 tons of styrene;
    - iii. 5.0 tons of methyl ethyl ketone (MEK); and
    - iv. 15.0 tons of total aggregate hazardous air pollutants (HAPs).
  - d. The maximum number of fixtures produced at this emissions unit shall not exceed 200 per year.
  - e. The OC emission limitations in OAC rule 3745-21-07(G) shall cease to be effective and federally enforceable on the date the U.S. EPA approves the current OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations of this rule shall be void.
  - f. A minimal amount of acetone is brushed on the tip of the spray gun when cleaning is needed.
- c) Operational Restrictions
- (1) The Polyad Preconcentrator and thermal oxidizer control systems shall be used whenever this emissions unit is in operation.
  - (2) The average combustion temperature within the thermal incinerator, for any 3-hour block of time the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature maintained during the most recent emissions test.  
  
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 178 degrees Fahrenheit.
  - (3) This emissions unit shall be total 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:
    - a. any natural draft opening (NDO) shall be at least four equivalent opening diameters from each VOC emitting point;
    - b. the total area of all NDOs shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling;



- c. the average facial velocity of air through all the NDOs 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;
  - d. the direction of air flow through all NDOs shall be into the enclosure; and
  - e. 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.
- (4) The permittee shall burn only natural gas in the drying oven serving this emissions unit. The emissions from natural gas combustion are permitted at the potential usage of natural gas in the drying oven.
- d) Monitoring and/or Recordkeeping Requirements

- (1) 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 emissions unit 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:

- a. 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 emissions unit was in operation, was more than 50 degrees Fahrenheit below the average temperature during the most recent emissions test that demonstrated compliance with applicable requirements; and
  - b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.
- (2) 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:

- a. the difference in pressure between the permanent total enclosure and the surrounding area(s); and
- b. a log of the downtime for the capture (collection) system, control device, and monitoring equipment, when the associated emissions unit was in operation.



- (3) The permittee shall collect and record the following information on a daily basis for each material employed in this emissions unit:
- a. the company identification for each process resin, catalyst, and primer employed;
  - b. the number of gallons or pounds of each process resin and catalyst employed;
  - c. the number of gallons or pounds of each primer employed;
  - d. the OC, VOC, and 4,4' methylene diphenyl diisocyanate (MDI) content of each process resin and catalyst employed, in pounds per gallon or in weight percent;
  - e. the OC and VOC content of each primer employed, in pounds per gallon or in weight percent;
  - f. if any process resin and catalyst contains any organic compound(s) not emitted as MDI, the daily OC and VOC emissions from all such process resins and catalysts employed, in pounds per day, i.e., the sum of "b" x ("d" – MDI content) for each process resin and catalyst;
  - g. the daily OC and VOC emissions from all primer coating employed, in pounds per day, i.e., the sum of "c" x "e" for each primer;
  - h. the total daily OC and VOC emission rates for all materials employed in this emissions unit R018, in pounds per hour, i.e., ("f" + "g") for both pollutants.
  - i. the total amount of styrene resin employed, in pounds per day; and
  - j. the total styrene emissions, in pounds per day, calculated by the following equation:

$$E = R \times \text{ton}/2,000 \text{ lbs} \times EF \times (1 - CE)$$

where:

E = styrene emissions, in pounds styrene per day

R = amount of styrene resin employed, in pounds resin per day

EF = emissions factor, in pounds styrene per ton resin, taken from Table 1 of 40 CFR 63, Subpart WWWW for an atomized mechanical resin application with nonvapor-suppressed resin in an open molding operation; and

CE = control efficiency of the polyad system, at 93% or 0.93.

- (4) The permittee shall collect and record the following information, including the calculation, on a monthly basis for this emissions unit:
- a. the monthly total OC and VOC emissions from all process resins, catalysts and primers (sum of d)(3)h for each day of the month) employed in this emissions unit;



- b. 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); and
  - c. the monthly styrene emissions, calculated by the sum of d)(3)j for each day of the month.
- (5) At the end of each month the permittee shall collect, calculate, and record the following rolling, 12-month emissions:
- a. the rolling, 12-month VOC emissions from this emissions unit, R018;
  - b. the rolling, 12-month VOC emissions 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 this emissions unit and all other emissions units at the facility (K001, P010, P011, P012, P013, P014, P015, P016, R005, R008, R009, R012, R013, R014, R015, R018, R019, R020, R022 and R023); and two tons of VOC emissions shall be added to the rolling, 12-month 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 for emissions units K001, R005, R008, R009, R018, R019, R020 and R022.
  - c. the rolling, 12-month MEK emissions from emissions units P010, P014 and P016;
  - d. the rolling, 12-month styrene emissions from emissions units R008, R018 and R022; and
  - e. the rolling, 12-month total combined HAP emissions, based upon a summation of the following:
    - i. the rolling, 12-month MEK emissions from emissions units P010, P014, and P016;
    - ii. the rolling, 12-month styrene emissions from emissions units R008, R018 and R022;
    - iii. the rolling, 12-month emissions of MDI from emissions units R012, R013, R014, R015, R018 and R023; and
    - iv. any other HAP(s) documented in the product data for coatings, resins, adhesives, mold cleaners, mold release agents, sealers, primers, solvents, cleanup materials, or other process materials employed, and calculated as the emissions for a rolling, 12-month period.
- (6) The permittee shall collect and record the following information, including the calculation, on a calendar year basis for this emissions unit:



- a. the total OC emissions, in tons per year, calculated by the sum of the daily OC emissions for each day of the year; and
  - b. the total number of fixtures produced at this emissions unit.
- (7) Modeling to demonstrate compliance with, the AToxic Air Contaminant Statute<sup>2</sup>, ORC 3704.03(F)(4)(b), was not necessary because the emissions unit's maximum annual emissions for each toxic air contaminant, as defined in OAC rule 3745-114-01, will be less than 1.0 ton per year. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.
- (8) 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
- (1) The permittee shall submit quarterly deviation (excursion) reports that include the following information for this emissions unit:
- a. an identification of each day during which the OC emissions from this emissions unit exceeded 1.28 pounds per day and the actual daily OC emissions for each such day;
  - b. an identification of each day during which the VOC emissions from this emissions unit exceeded 1.28 pounds per day and the actual daily VOC emissions for each such day;
  - c. an identification of each day during which the styrene emissions from this emissions unit exceeded 1.28 pounds per day and the actual styrene emissions for each such day; and
  - d. an identification of each month during which the rolling, 12-month VOC emissions from this emissions unit, R018, exceeded 0.20 ton.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify any rolling, 12-month period during which the sum of the emissions from this emissions unit (R018), and all other emissions units at the facility (K001, P010, P011, P012, P013, P014, P015, P016, R005, R008, R009, R012, R013, R014, R015, R019, R020, R022 and R023), exceed any of the following limitations:
- a. 73.18 tons VOC;
  - b. 9.95 tons styrene;
  - c. 5.0 tons MEK; and
  - d. 15.0 tons of total aggregate HAPs.



- (3) 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

- (1) 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:

- a. Emission Limitations:

VOC emissions shall not exceed 1.28 pounds per day and 0.20 ton per rolling, 12-month period.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3), d)(4) and d)(5).

- b. Emission Limitations:

OC emissions shall not exceed 1.28 pounds per day and 0.20 ton per year.

Applicable Compliance Method:

Compliance shall be demonstrated based upon the record keeping requirements specified in d)(3), d)(4) and d)(6).

- c. 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:

Within 2 months of permit issuance, the capture efficiency requirement of 100% shall be determined using Methods 204 - 204F, as specified in 40 CFR Part 51, Appendix M.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit a notification to the Ohio EPA, Northeast District Office. The notification shall describe in detail the proposed test methods and procedures, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA, Northeast District Office's refusal to accept the results of the test(s).

Personnel from the Ohio EPA, Northeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and



information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the total enclosure.

A comprehensive written report on the results of the test(s) shall be signed by the person(s) responsible for the test(s) and submitted to the Ohio EPA, Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northeast District Office.

The control efficiency requirement of 93%, by weight, was demonstrated during testing performed on November 3, 2005. Re-testing may be required when the Federally Enforceable Permit-to-Install and Operate for the other emissions units at the facility is issued.

d. Emission Limitation:

The styrene emissions from this emissions unit shall not exceed 1.28 lbs per day.

Applicable Compliance Method:

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

e. Emission Limitations from natural gas combustion:

Filterable PE shall not exceed 0.0003 pound per hour.

OC emissions shall not exceed 0.002 pound per hour.

VOC emissions shall not exceed 0.001 pound per hour.

NOx emissions shall not exceed 0.02 pound per hour.

CO emissions shall not exceed 0.01 pound per hour.

SO2 emissions shall not exceed 0.0001 pound per hour.

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 (150 ft<sup>3</sup>/hr). 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.

f. Emission Limitations from natural gas combustion:

Filterable PE shall not exceed 0.001 ton per year.



OC emissions shall not exceed 0.01 ton per year.

VOC emissions shall not exceed 0.004 ton per year.

NOx emissions shall not exceed 0.07 ton per year.

CO emissions shall not exceed 0.06 ton per year.

SO2 emissions shall not exceed 0.0004 ton per year.

Applicable Compliance Method:

The annual emission limitations are based on the following equation:

$$E = (EF \times 150 \text{ ft}^3/\text{hr} \times 8,760 \text{ hrs/yr}) / (1,000,000 \times 2,000)$$

where:

E = emissions, in tons per year;

EF = appropriate emission factor, as specified in f)(1)e, in lb/mmft<sup>3</sup>; and

150ft<sup>3</sup> = maximum hourly natural gas usage rate of drying oven.

g. 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.

h. Emission Limitations:

The total emissions from this emissions unit R018, and all other emissions units at the facility (K001, P010, P011, P012, P013, P014, P015, P016, R005, R008, R009, R012, R013, R014, R015, R018, R019, R020, R022 and R023) shall not exceed the following emission limitations for any rolling, 12-month period:

- i. 73.18 tons of VOC;
- ii. 9.95 tons of styrene;
- iii. 5.0 tons of methyl ethyl ketone (MEK); and
- iv. 15.0 tons of total aggregate hazardous air pollutants (HAPs)

Applicable Compliance Method:

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



State of Ohio Environmental Protection Agency  
Division of Air Pollution Control

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

**Permit Number:** 02-23002

**Facility ID:** 0215090011

**Effective Date:** 5/15/2009

g) Miscellaneous Requirements

- (1) The requirements of this Permit-to-Install and Operate shall supercede the requirements for this emissions unit contained in Permit-to-Install number 02-18111, issued modified on November 30, 2006.