



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
COLUMBIANA COUNTY**

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 02-15950**

**DATE: 12/6/2001**

American Standard Inc  
Kathy Royle  
605 South Ellsworth Ave  
Salem, OH 44460

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

NEDO



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**Permit To Install  
Terms and Conditions**

**Issue Date: 12/6/2001  
Effective Date: 12/6/2001**

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**FINAL PERMIT TO INSTALL 02-15950**

Application Number: 02-15950  
APS Premise Number: 0215090011  
Permit Fee: **\$600**  
Name of Facility: American Standard Inc  
Person to Contact: Kathy Royle  
Address: 605 South Ellsworth Ave  
Salem, OH 44460

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**605 South Ellsworth Ave  
Salem, Ohio**

Description of proposed emissions unit(s):  
**New FRP Lamination booth and modified mixing operation.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

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

#### 3. Records Retention Requirements

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

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio

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**Issued: 12/6/2001**

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Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

**10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

**11. Applicability**

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit to Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

**12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the emissions unit(s) covered by this permit.

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#### 14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

#### 15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

### B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)**  
**TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	4.1

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
Mixing operations controlled by the Polyad system. Resin, filler and pigments are mixed in batches and temporarily stored prior to use in the FRP spray application processes.	OAC rule 3745-31-05(A)(3)	0.29 pound per hour and 1.30 ton per year of VOC emissions.  This facility shall maintain for this emissions unit a VOC capture efficiency of 100% by weight and a control efficiency (i.e., destruction or removal efficiency) which is at least 95% by weight.
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
	OAC rule 3745-17-08(B)	Reasonably available control measures (RACM) that are sufficient to minimize or eliminate visible emissions of fugitive dust. See Additional Terms and Conditions A.2.a.

**2. Additional Terms and Conditions**

- 2.a The permittee shall minimize or eliminate visible emissions of fugitive dust through the employment of reasonably available control measures (RACM). The collection efficiency of the air pollution control device for this emissions unit shall be sufficient to minimize or eliminate visible particulate emissions of fugitive dust at all points of capture.

**B. Operational Restrictions**

1. The Polyad control system shall be used while this emissions unit is in operation.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.
3. The pressure drop across the baghouse shall be maintained within the range of 2 to 4 inches of water while the emissions unit is in operation.
4. The mixing system shall be sealed such that all VOC emissions are captured, collected and vented to the Polyad system.

**C. 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, 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 during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was .
  - 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 properly install, operate, and maintain equipment to monitor the pressure drop across the baghouse while the emissions unit is in operation. The monitoring equipment shall be installed, 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 baghouse on a daily basis.
  3. The permittee shall collect and record the following information on a monthly basis for each material employed in this emissions unit:

- a. the company identification for each material employed;
- b. the number of gallons of each material employed;
- c. the VOC content of each material employed, in pounds per gallon;
- d. the uncontrolled VOC emission rate for all materials employed, in pounds per month;
- e. the total number of hours of operation of the emissions unit, in hours per month;
- f. the VOC emission rate for all materials employed, in pounds per hour, using the following equation:

$$E \text{ (lbs/hr)} = \frac{\text{(uncontrolled VOC emission rate, lbs/month} \times (1 - (\text{CE} / 100)))}{\text{hours of operation, hrs/month}}$$

Where: E = VOC emission rate, in pounds per hour  
 CE = control efficiency of Polyad system during the most recent emission test that demonstrated the emissions unit was in compliance.

4. The permit to install for this emissions unit (P009) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Styrene

TLV (mg/m<sup>3</sup>): 85.2 mg/m<sup>3</sup>

Maximum Hourly Emission Rate (lbs/hr): 0.93 lb/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 779 ug/m<sup>3</sup>

MAGLC (ug/m<sup>3</sup>): 2,029 ug/m<sup>3</sup>

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such

parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be still satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
  - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
  - c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
5. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time

Emissions Unit ID: P009

during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.

2. The permittee shall submit pressure drop deviation (excursion) reports that identify that all periods of time during which the pressure drop across the baghouse did not comply with the allowable range specified above.
3. The permittee shall submit deviation (excursion) reports which identify each month during which the VOC emissions from the emissions unit exceeded 0.29 pound per hour and the actual VOC emissions.

#### E. Testing Requirements

1. Emission Limitations:  
100% by weight VOC capture efficiency  
95% by weight VOC control efficiency

Applicable Compliance Method:

U.S. EPA Reference Methods 1-4, 25 or 25A of 40 CFR Part 60, Appendix A and Methods 204 through 204F of 40 CFR Part 51, Appendix M.

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC emissions, and the capture efficiency and control efficiency limitations for VOC emissions.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 or 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC emissions, are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
- e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative

method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, 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 emission 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 control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests 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.

2. Emission Limitation:  
0.29 pound per hour of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.3 and the testing requirements specified above.

3. Emission Limitation:  
1.30 ton per year of VOC emissions

Applicable Compliance Method:

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Emissions Unit ID: **P009**

The annual limit is based on the allowable hourly emission rate (0.29 lb/hr) 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 limitation, compliance will also be shown for the annual limitation.

**F. Miscellaneous Requirements**

The requirements of this Permit to Install (02-15950) shall supersede the requirements for this emissions unit contained in Permit to Install number 17-1493 issued on October 30, 1996.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
FRP Lamination Line vented to the Polyad control system. The Lamination Line includes a FRP resin coating booth, transition area and a curing oven.	OAC rule 3745-31-05(A)(3)	0.64 pound per hour and 2.80 tons per year of VOC emissions.  This facility shall maintain for this emissions unit a VOC capture efficiency of 100% by weight and a control efficiency (i.e., destruction or removal efficiency) which is at least 95% by weight.
	OAC rule 3745-21-07(G)(2)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

**2. Additional Terms and Conditions**

- 2.a None

**B. Operational Restrictions**

1. The Polyad control system shall be used while this emissions unit is in operation.
2. The average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the

average temperature during the most recent emission test that demonstrated the emissions unit was in compliance.

3. The permanent total enclosure shall be maintained under negative pressure, at a minimum pressure differential that is not less than the minimum pressure differential (inches of water) established during the most recent emission test that demonstrated the emissions unit was in compliance, whenever the emissions unit is in operation.
4. This emissions unit shall be totally enclosed such that all VOC 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 unless otherwise specified by the Administrator;
  - b. 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;
  - c. the average facial velocity (FV) of air through all the NDO's shall be at least 3,600 m/hr (200 fpm);
  - d. the differential pressure between the inside and outside of the enclosure shall not be less than 0.007 inch of water;
  - e. the direction of air flow through all NDO's shall be into the enclosure;
  - f. all access doors and windows whose areas are not included in section (b) and are not included in the calculations in section (c) shall be closed during routine operation of the process; and
  - g. all VOC emissions from this emissions unit must be captured and contained for discharge to the Polyad control system.

### **C. 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

Emissions Unit ID: R022

manufacturer's recommendations, 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 during which the average combustion temperature within the thermal oxidizer, when the emissions unit was in operation, was .
  - 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, maintain and operate 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 manuals.

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).
  - b. A log or record of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
3. The permittee shall collect and record the following information on a monthly basis for each material employed in this emissions unit:
- a. the company identification for each material employed;
  - b. the number of gallons of each material employed;
  - c. the VOC content of each material employed, in pounds per gallon;
  - d. the uncontrolled VOC emission rate for all materials employed, in pounds per month;
  - e. the total number of hours of operation of the emissions unit, in hours per month;
  - f. the VOC emission rate for all materials employed, in pounds per hour, using the following equation:

$$E \text{ (lbs/hr)} = \frac{\text{(uncontrolled VOC emission rate, lbs/month} \times (1 - (\text{CE} / 100)))}{\text{hours of operation, hrs/month}}$$

Where: E = VOC emission rate, in pounds per hour  
 CE = control efficiency of Polyad system during the most recent emission

test that demonstrated the emissions unit was in compliance.

4. The permit to install for this emissions unit (R022) was evaluated based on the actual materials (typically coatings and cleanup materials) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Styrene

TLV (mg/m<sup>3</sup>): 85.2 mg/m<sup>3</sup>

Maximum Hourly Emission Rate (lbs/hr): 0.93 lb/hr

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 779 ug/m<sup>3</sup>

MAGLC (ug/m<sup>3</sup>): 2,029 ug/m<sup>3</sup>

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and

Emissions Unit ID: R022

- c. physical changes to the emissions unit or its exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
5. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record, and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify all 3-hour blocks of time during which the average combustion temperature within the thermal incinerator does not comply with the temperature limitation specified above.
2. The permittee shall submit pressure differential deviation (excursion) reports that identify all periods of time during which the permanent total enclosure was not maintained at the required differential pressure specified above.
3. The permittee shall submit deviation (excursion) reports which identify each month during which the VOC emissions from the emissions unit exceeded 0.64 pound per hour and the actual VOC emissions.

#### **E. Testing Requirements**

1. Emission Limitations:  
100% by weight VOC capture efficiency  
95% by weight VOC control efficiency

Applicable Compliance Method:

U.S. EPA Reference Methods 1-4, 25 or 25A of 40 CFR Part 60, Appendix A and Methods 204

through 204F of 40 CFR Part 51, Appendix M.

The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted within 3 months after startup of the emissions unit.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC emissions, and the capture efficiency and control efficiency limitations for VOC emissions.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): Method 25 or 25A of 40 CFR Part 60, Appendix A. The test method(s) which must be employed to demonstrate compliance with the capture efficiency and control efficiency limitations for VOC emissions, are specified below. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the emissions units are operating at or near their maximum capacities, unless otherwise specified or approved by the Ohio EPA, Northeast District Office.
- e. The capture efficiency shall be determined using Methods 204 through 204F, as specified in 40 CFR Part 51, Appendix M, or the permittee may request to use an alternative method or procedure for the determination of capture efficiency in accordance with the USEPA's "Guidelines for Determining Capture Efficiency," dated January 9, 1995. (The Ohio EPA will consider the request, including an evaluation of the applicability, necessity, and validity of the alternative, and may approve the use of the alternative if such approval does not contravene any other applicable requirement.) The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the

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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 emission 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 control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests 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.

2. Emission Limitation:  
0.64 pound per hour of VOC emissions

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements specified in Section C.3 and the testing requirements specified above.

3. Emission Limitation:  
2.80 tons per year of VOC emissions

Applicable Compliance Method:

The annual limit is based on the allowable hourly emission rate (0.64 lb/hr) 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 limitation, compliance will also be shown for the annual limitation.

## F. Miscellaneous Requirements

None