



State of Ohio Environmental Protection Agency

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

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 02-14514

DATE: 2/12/2002

Zehrco Plastics Inc
Joseph Braymer
5500 Washington Ave
Ashtabula, OH 44004

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
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

NEDO



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

FINAL PERMIT TO INSTALL 02-14514

Application Number: 02-14514
APS Premise Number: 0204000441
Permit Fee: **\$4800**
Name of Facility: Zehrco Plastics Inc
Person to Contact: Joseph Braymer
Address: 5500 Washington Ave
Ashtabula, OH 44004

Location of proposed air contaminant source(s) [emissions unit(s)]:
4737 Kister Court
Saybrook Township, Ohio

Description of proposed emissions unit(s):
2 Natural Gas-fired Engine Generator Sets, 3 Polyester Resin/Styrene Paste Mixers, 1 SMC Machine, 3 BMC Mixers, 3 FRP Mold Press Groups, 3 Paint Booths & 1 Paint Cure Oven.

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. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written 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. See B.10 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

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

5. Severability Clause

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

6. General Requirements

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

7. 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.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are

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

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. 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 source(s) covered by this permit.

11. 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.

12. 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.

B. State Only Enforceable 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 of state-only enforceable 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 state-only required 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. 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.

4. 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.

5. 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 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.

6. 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.

7. 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).

8. 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.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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.

C. 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>
NO _x	44.40
CO	28.80
PE	3.36
OC	177.82

<u>Emissions Unit(s)</u>	<u>Pollutant</u>	<u>Tons Per Year</u>
B001 & B002,	NO _x	$(2 \times 22.2) + 44.40$
B001 & B002,	CO	$(2 \times 14.4) + 28.80$
B001 & B002, P001-P003, R001-R003	PE	$(2 \times 0.69) + (3 \times 0.44) + (3 \times 0.22) = 3.36$
B001 & B002, P001-P003, P004, P005, P006, P007, P008-P010, P011, R001 & R002, R003	OC	$(2 \times 6.66) + (3 \times 10.8) + 13.4 + 3.69 + 6.57 + 10.8 + (3 \times 7.3) + 2.74 + (2 \times 23.4) + 26.2 = 177.82$

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
B001 - 1152 hp natural gas-fired engine generator, Co. ID. G-1	OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions (PE). The PE rates shall not exceed 0.019 lb/mmBtu of actual heat input and 0.69 tons/year. Nitrogen oxide (NO _x) emissions shall not exceed 5.07 lbs/hr and 22.2 tons/year. Carbon monoxide (CO) emissions shall not exceed 3.29 lbs/hr and 14.4 tons/year. Organic compound (OC) emissions shall not exceed 1.52 lbs/hr and 6.66 tons/year.
	OAC rule 3745-17-07(A)	See section A.I.2.a.
	OAC rule 3745-17-11(B)(5)	See section A.I.2.a.

2. Additional Terms and Conditions

- 2.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).

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

13

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: B001

1. 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 fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation: no visible PE are permitted.

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.019 lb PE/mmBtu.

Applicable Compliance Method(s): Compliance shall be determined by assuming the emissions factor of 0.00950 lb PM₁₀/mmBtu of fuel input as noted in Table 3.2-3 of AP-42 chapter 3.2 (7/00) includes total PE for a natural gas fired 4-stroke internal combustion engine. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.69 ton PE/year.

Applicable Compliance Method: To determine the annual PE rate, the following equation may be employed:

$$E(\text{PE}) = \text{EF}(\text{PE}) \times \text{GAS USAGE} \times 1030 \text{ Btu/ft}^3 \times \text{mmBtu}/10^6 \text{ Btu} \times \text{HRS} \times \text{ton}/2000 \text{ lbs.}$$

where the following applies:

$E(\text{PE})$ = the annual PE rate, in tons per year.

$\text{EF}(\text{PE})$ = the particulate emission factor, which is 0.00950 lb PM₁₀/mmBtu of fuel input as noted in Table 3.2-3 of AP-42 chapter 3.2 (7/00).

GAS USAGE = volume of natural gas fuel usage; maximum usage rate is 8,008 ft³ as noted in the permit application.

1030 Btu/ft³ = the heat content of natural gas fuel.

HRS = the actual operating hours of this emissions unit.

- d. Emission Limitation: 5.07 lbs NO_x/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{NO}_x) = \text{HP} \times \text{EF}(\text{NO}_x) \times 0.0022 \text{ lb NO}_x / \text{gram. NO}_x.$$

where the following applies:

$E(\text{NO}_x)$ = the maximum NO_x emissions, in pounds per hour.

HP = maximum rated engine capacity, which is 1152 brake horsepower hour as noted in the manufacturer specifications.

EF(NO_x) = NO_x emissions factor, which is 2.0 grams NO_x/hp-hr as noted in the manufacturer specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7E or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 22.2 ton NO_x/year.

Applicable Compliance Method: To determine the actual NO_x rate, the maximum hourly rate, as determined from the equation as noted in section A.V.1.c., shall be multiplied by the actual operating hours for the calendar year, and divided by 2000 lbs/ton.

- f. Emission Limitation: 3.29 lbs CO/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{CO}) = \text{HP} \times \text{EF}(\text{CO}) \times 0.0022 \text{ lb CO/gram. CO.}$$

where the following applies:

$E(\text{CO})$ = the maximum CO emissions, in pounds per hour.

EF(CO) = CO emissions factor, which is 1.3 grams CO/hp-hr as noted in the manufacturer

specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10 or an equivalent alternate method as approved by Ohio EPA.

- g. Emission Limitation: 14.4 ton CO/year.

Applicable Compliance Method: To determine the actual CO rate, the maximum rate, as determined from the equation as noted in section A.V.1.f., shall be multiplied by the actual operating hours for the calendar year and divided by 2000 lbs/ton.

- h. Emission Limitation: 1.52 lbs OC/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(OC) = HP \times EF(OC) \times 0.0022 \text{ lb OC/gram. OC.}$$

where the following applies:

$E(OC)$ = the maximum OC emissions, in pounds per hour.

$EF(OC)$ = OC emissions factor, which is 0.6 grams OC/hp-hr as noted in the manufacturer specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- i. Emission Limitation: 6.66 ton OC/year.

Applicable Compliance Method: To determine the actual OC rate, the maximum hourly rate, as determined from the equation as noted in section A.V.1.h, shall be multiplied by the actual operating hours for the calendar year and divided by 2000 lbs/ton.

VI. Miscellaneous Requirements

None

17

Zehrco Plastics Inc

PTI Application: **02 14514**

Issued

Facility ID: **0204000441**

Emissions Unit ID: B001

B. State Only Enforceable Section

I. 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>
B001 - 1152 hp natural gas-fired engine generator, Co. ID. G-1	None	Compliance with the Air Toxic Policy as specified in section B.III.1.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because air toxic compounds from natural gas combustion sources are not usually modeled. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

IV. Reporting Requirements

None

V. Testing Requirements

19

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: B001

None

20

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: B001

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
B002 - 1152 hp natural gas-fired engine generator; Co. ID: G-2	OAC rule 3745-31-05(A)(3)	There shall be no visible particulate emissions (PE). The PE rates shall not exceed 0.019 lb/mmBtu of actual heat input and 0.69 tons/year. Nitrogen oxide (NO _x) emissions shall not exceed 5.07 lbs/hr and 22.2 tons/year. Carbon monoxide (CO) emissions shall not exceed 3.29 lbs/hr and 14.4 tons/year. Organic compound (OC) emissions shall not exceed 1.52 lbs/hr and 6.66 tons/year.
	OAC rule 3745-17-07(A)	See section A.I.2.a.
	OAC rule 3745-17-11(B)(5)	See section A.I.2.a.

2. Additional Terms and Conditions

- 2.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).

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

22

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: B002

1. 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 fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit.

V. Testing Requirements

1. Compliance with the emission limitation(s) in Section A.I.1. of these terms and conditions shall be determined in accordance with the following method(s):

- a. Emission Limitation: no visible PE are permitted.

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.019 lb PE/mmBtu.

Applicable Compliance Method(s): Compliance shall be determined by assuming the emissions factor of 0.00950 lb PM₁₀/mmBtu of fuel input as noted in Table 3.2-3 of AP-42 chapter 3.2 (7/00) includes total PE for a natural gas fired 4-stroke internal combustion engine. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.69 ton PE/year.

Applicable Compliance Method: To determine the annual PE rate, the following equation may be employed:

$$E(\text{PE}) = \text{EF}(\text{PE}) \times \text{GAS USAGE} \times 1030 \text{ Btu/ft}^3 \times \text{mmBtu}/10^6 \text{ Btu} \times \text{HRS} \times \text{ton}/2000 \text{ lbs.}$$

where the following applies:

$E(\text{PE})$ = the annual PE rate, in tons per year.

$\text{EF}(\text{PE})$ = the particulate emission factor, which is 0.00950 lb PM₁₀/mmBtu of fuel input as noted in Table 3.2-3 of AP-42 chapter 3.2 (7/00).

GAS USAGE = volume of natural gas fuel usage; maximum usage rate is 8,008 ft³ as noted in the permit application.

1030 Btu/ft³ = the heat content of natural gas fuel.

HRS = the actual operating hours of this emissions unit.

- d. Emission Limitation: 5.07 lbs NO_x/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{NO}_x) = \text{HP} \times \text{EF}(\text{NO}_x) \times 0.0022 \text{ lb NO}_x / \text{gram. NO}_x .$$

where the following applies:

$E(\text{NO}_x)$ = the maximum NO_x emissions, in pounds per hour.

HP = maximum rated engine capacity, which is 1152 brake horsepower hour as noted in the manufacturer specifications.

EF(NO_x) = NO_x emissions factor, which is 2.0 grams NO_x/hp-hr as noted in the manufacturer specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 7E or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 22.2 ton NO_x/year.

Applicable Compliance Method: To determine the actual NO_x rate, the maximum hourly rate, as determined from the equation as noted in section A.V.1.c., shall be multiplied by the actual operating hours for the calendar year, and divided by 2000 lbs/ton.

- f. Emission Limitation: 3.29 lbs CO/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{CO}) = \text{HP} \times \text{EF}(\text{CO}) \times 0.0022 \text{ lb CO/gram. CO.}$$

where the following applies:

$E(\text{CO})$ = the maximum CO emissions, in pounds per hour.

EF(CO) = CO emissions factor, which is 1.3 grams CO/hp-hr as noted in the manufacturer

specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 10 or an equivalent alternate method as approved by Ohio EPA.

- g. Emission Limitation: 14.4 ton CO/year.

Applicable Compliance Method: To determine the actual CO rate, the maximum rate, as determined from the equation as noted in section A.V.1.f., shall be multiplied by the actual operating hours for the calendar year and divided by 2000 lbs/ton.

- h. Emission Limitation: 1.52 lbs OC/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(OC) = HP \times EF(OC) \times 0.0022 \text{ lb OC/gram. OC.}$$

where the following applies:

$E(OC)$ = the maximum OC emissions, in pounds per hour.

$EF(OC)$ = OC emissions factor, which is 0.6 grams OC/hp-hr as noted in the manufacturer specifications.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- i. Emission Limitation: 6.66 ton OC/year.

Applicable Compliance Method: To determine the actual OC rate, the maximum hourly rate, as determined from the equation as noted in section A.V.1.h, shall be multiplied by the actual operating hours for the calendar year and divided by 2000 lbs/ton.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
B002 - 1152 hp natural gas-fired engine generator; Co. ID: G-2	None	Compliance with the Air Toxic Policy as specified in section B.III.1.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because air toxic compounds from natural gas combustion sources are not usually modeled. 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 pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

IV. Reporting Requirements

None

V. Testing Requirements

None

27

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: B002

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	
P001 - Mixer 1 for Polyester resin/styrene paste with a particulate control filter	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G)(2)
		OAC rule 3745-31-28(B)
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11	

Applicable Emissions
Limitations/Control
Measures

Visible particulate emissions (PE) from this emissions unit shall not exceed 5% opacity as a 6-minute average, except as specified by rule. The PE rate shall not exceed 0.10 lb/hr and 0.44 ton/year. Organic compound (OC) emissions shall not exceed 1.98 lbs/hr, excluding emissions from cleanup materials. OC emissions shall not exceed 59.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 10.0 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.

See section A.I.2.c.

See section A.I.2.c.

OC emissions shall not exceed 40 lbs/day, excluding

emissions from non-photochemically reactive cleanup materials. See section A.I.2.d.

This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.e.

2. Additional Terms and Conditions

- 2.a** The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b** The OC emissions from the mix operations consist of styrene, a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.c** 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.d** The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
 - i. A closed pipeline system shall be employed to transfer polyester resin-styrene mix from any storage tank into the mix vessel associated with this emissions unit. The exhaust vacuum line ('sweep') shall be closed during resin transfer into this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The polyester resin/styrene paste, an intermediate product, shall be transferred by closed pipeline to its next process destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)].

II. Operational Restrictions

- 1. The permittee shall operate the particulate control filter whenever this emissions unit is in operation..
- 2. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each polyester resin/styrene paste produced and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste produced, in pounds.
 - d. The styrene content of each polyester resin/styrene paste produced, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene pastes, in pounds.
 - f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene pastes, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in gallons.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pounds per gallon.
 - l. The OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene pastes and all cleanup materials, in pounds per day.
 - n. An identification of any time periods when the particulate control filter was not in service when the emissions unit was in operation.
2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:

Process unit: closed pipeline system for polyester resin-styrene mix transfer from any storage tank into the mix vessel Minimum Inspection frequency: every other day

Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing Minimum Inspection frequency: once per resin paste mix batch produced

Process unit: closed pipeline system for resin paste mix transfer from the mix vessel to any process unit destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)]

Minimum Inspection frequency: every other day

3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 1.98 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 40 pounds per day, and the actual OC emissions for each such day.

Emissions Unit ID: P001

- c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 59.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
 3. The permittee shall submit annual reports which specify the total OC emissions and particulate emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
 4. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control, Central Office) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.
 5. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps..
 - b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 5% opacity of visible PE, as a 6-minute average..

34

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P001

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.10 lb PE/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{PE}) = P \times \text{CONC}_{\text{solid}} \times \text{EF}(\text{PE}) \times (1 - \text{CE}).$$

where the following applies:

$$E(\text{PE}) = \text{PE}, \text{ in pounds per hour.}$$

P = maximum polyester resin/styrene paste production rate, which is 1800 lbs/hr as noted in the permit application.

$\text{CONC}_{\text{solid}}$ = maximum solids concentration in paste, which is 0.747 lbs solids/lb paste as noted in the permit application.

$\text{EF}(\text{PE})$ = PE factor, which is 0.001 lb uncontrolled PE per pound available dry solids from engineering estimates for a closed system as noted in the permit application.

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.44 ton PE/year.

Applicable Compliance Method(s): To determine the actual PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by the summation of the actual operating hours, as required by section A.III.1., for the calendar year and divided by 2000 lbs/ton.

- d. Emission Limitation: 1.98 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as

36

Zehrco Plastics Inc
PTI Application: **02 14514**
Issued

Facility ID: **0204000441**

Emissions Unit ID: P001

appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste mix operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as noted in AP-42 chapter 6.4 (5/83).

- f. Emission Limitation: 59.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance may be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$EC(OC)$ = OC emissions from the cleanup materials, in pounds per day.

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene paste mixes and all cleanup materials:

38

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P001

$$\text{EOC}(\text{lbs/day}) = \text{EM}(\text{OC}) + \text{EC}(\text{OC}).$$

- g. Emission Limitation: 10.8 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste mixing operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P001 - Mixer 1 for Polyester resin/styrene paste	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Zehrco Plastics Inc
PTI Application: 02 14514
Issued

Facility ID: 0204000441

Emissions Unit ID: P001

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m ³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m ³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m ³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86$ lbs/hr	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	OAC rule 3745-31-28(B)
P002 - Mixer 2 for Polyester resin/styrene paste with a particulate control filter	OAC rule 3745-31-05(A)(3)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11	
	OAC rule 3745-21-07(G)(2)	

Applicable Emissions
Limitations/Control
Measures

Visible particulate emissions (PE) from this emissions unit shall not exceed 5% opacity as a 6-minute average, except as specified by rule. The PE rate shall not exceed 0.10 lb/hr and 0.44 ton/year. Organic compound (OC) emissions shall not exceed 1.98 lbs/hr, excluding emissions from cleanup materials. OC emissions shall not exceed 59.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 10.0 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.

See section A.I.2.c.

See section A.I.2.c.

OC emissions shall not exceed 40 lbs/day, excluding

emissions from non-photochemically reactive cleanup materials. See section A.I.2.d.

This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.e.

2. Additional Terms and Conditions

- 2.a** The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b** The OC emissions from the mix operations consist of styrene, a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.c** 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.d** The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
 - i. A closed pipeline system shall be employed to transfer polyester resin-styrene mix from any storage tank into the mix vessel associated with this emissions unit. The exhaust vacuum line ('sweep') shall be closed during resin transfer into this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The polyester resin/styrene paste, an intermediate product, shall be transferred by closed pipeline to its next process destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)].

II. Operational Restrictions

- 1. The permittee shall operate the particulate control filter whenever this emissions unit is in operation..
- 2. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each polyester resin/styrene paste produced and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste produced, in pounds.
 - d. The styrene content of each polyester resin/styrene paste produced, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene pastes, in pounds.
 - f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene pastes, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in gallons.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pounds per gallon.
 - l. The OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene pastes and all cleanup materials, in pounds per day.
 - n. An identification of any time periods when the particulate control filter was not in service when the emissions unit was in operation.

2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:

Process unit: closed pipeline system for polyester resin-styrene mix transfer from any storage tank into the mix vessel Minimum Inspection frequency: every other day

Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing Minimum Inspection frequency: once per resin paste mix batch produced

Process unit: closed pipeline system for resin paste mix transfer from the mix vessel to any process unit destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)]

Minimum Inspection frequency: every other day

3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 1.98 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 40 pounds per day, and the actual OC emissions for each such day.

- c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 59.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
3. The permittee shall submit annual reports which specify the total OC emissions and particulate emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
4. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control, Central Office) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.
5. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps..
 - b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

Emissions Unit ID: P002

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 5% opacity of visible PE, as a 6-minute average..

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.10 lb PE/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{PE}) = P \times \text{CONCsolid} \times \text{EF}(\text{PE}) \times (1 - \text{CE}).$$

where the following applies:

$$E(\text{PE}) = \text{PE}, \text{ in pounds per hour.}$$

P = maximum polyester resin/styrene paste production rate, which is 1800 lbs/hr as noted in the permit application.

CONCsolid = maximum solids concentration in paste, which is 0.747 lbs solids/lb paste as noted in the permit application.

$\text{EF}(\text{PE})$ = PE factor, which is 0.001 lb uncontrolled PE per pound available dry solids from engineering estimates for a closed system as noted in the permit application.

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.44 ton PE/year.

Applicable Compliance Method(s): To determine the actual PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by the summation of the actual operating hours, as required by section A.III.1., for the calendar year and divided by 2000 lbs/ton.

- d. Emission Limitation: 1.98 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests

53

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P002

performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste mix operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as noted in AP-42 chapter 6.4 (5/83).

- f. Emission Limitation: 59.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance may be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$EC(OC)$ = OC emissions from the cleanup materials, in pounds per day.

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene paste mixes and all cleanup materials:

55

Zehrco Plastics Inc

PTI Application: 02 14514

Issued

Facility ID: 0204000441

Emissions Unit ID: P002

$$EOC(\text{lbs/day}) = EM(OC) + EC(OC).$$

- g. Emission Limitation: 10.8 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste mixing operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P002 - Mixer 2 for Polyester resin/styrene paste	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) ($\mu\text{g}/\text{m}^3$)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Acceptable Ground Level Concentration (MAGLC), ($\mu\text{g}/\text{m}^3$)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 \times 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the

Emissions Unit ID: P002

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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	
P003 - Mixer 3 for Polyester resin/styrene paste with a particulate control filter	OAC rule 3745-31-05(A)(3)	OAC rule 3745-21-07(G)(2)
		OAC rule 3745-31-28(B)
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11	

Applicable Emissions
Limitations/Control
Measures

Visible particulate emissions (PE) from this emissions unit shall not exceed 5% opacity as a 6-minute average, except as specified by rule. The PE rate shall not exceed 0.10 lb/hr and 0.44 ton/year. Organic compound (OC) emissions shall not exceed 1.98 lbs/hr, excluding emissions from cleanup materials. OC emissions shall not exceed 59.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 10.0 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.

See section A.I.2.c.

See section A.I.2.c.

OC emissions shall not exceed 40 lbs/day, excluding

emissions from non-photochemically reactive cleanup materials. See section A.I.2.d.

This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.e.

2. Additional Terms and Conditions

- 2.a** The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b** The OC emissions from the mix operations consist of styrene, a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.c** 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.d** The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
- i. A closed pipeline system shall be employed to transfer polyester resin-styrene mix from any storage tank into the mix vessel associated with this emissions unit. The exhaust vacuum line ('sweep') shall be closed during resin transfer into this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The polyester resin/styrene paste, an intermediate product, shall be transferred by closed pipeline to its next process destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)].

II. Operational Restrictions

1. The permittee shall operate the particulate control filter whenever this emissions unit is in operation..
2. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each polyester resin/styrene paste produced and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste produced, in pounds.
 - d. The styrene content of each polyester resin/styrene paste produced, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene pastes, in pounds.
 - f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene pastes, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in gallons.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pounds per gallon.
 - l. The OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene pastes and all cleanup materials, in pounds per day.
 - n. An identification of any time periods when the particulate control filter was not in service when the emissions unit was in operation.

64

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P003

2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:

Process unit: closed pipeline system for polyester resin-styrene mix transfer from any storage tank into the mix vessel Minimum Inspection frequency: every other day

Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing Minimum Inspection frequency: once per resin paste mix batch produced

Process unit: closed pipeline system for resin paste mix transfer from the mix vessel to any process unit destination [i.e. the SMC Machine (P004) or to one of the BMC Mixers (P005-P006)]

Minimum Inspection frequency: every other day

3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 1.98 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 40 pounds per day, and the actual OC emissions for each such day.

Emissions Unit ID: P003

- c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 59.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
 3. The permittee shall submit annual reports which specify the total OC emissions and particulate emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
 4. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control, Central Office) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.
 5. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps..
 - b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 5% opacity of visible PE, as a 6-minute average..

67

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P003

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.10 lb PE/hr.

Applicable Compliance Method(s): Compliance may be determined based upon the following equation:

$$E(\text{PE}) = P \times \text{CONCsolid} \times \text{EF}(\text{PE}) \times (1 - \text{CE}).$$

where the following applies:

$$E(\text{PE}) = \text{PE}, \text{ in pounds per hour.}$$

P = maximum polyester resin/styrene paste production rate, which is 1800 lbs/hr as noted in the permit application.

CONCsolid = maximum solids concentration in paste, which is 0.747 lbs solids/lb paste as noted in the permit application.

EF(PE) = PE factor, which is 0.001 lb uncontrolled PE per pound available dry solids from engineering estimates for a closed system as noted in the permit application.

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.44 ton PE/year.

Applicable Compliance Method(s): To determine the actual PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by the summation of the actual operating hours, as required by section A.III.1., for the calendar year and divided by 2000 lbs/ton.

- d. Emission Limitation: 1.98 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests

Zehrco Plastics Inc
PTI Application: 02-14514
Issued

Facility ID: 0204000441

Emissions Unit ID: P003

performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste mix operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as noted in AP-42 chapter 6.4 (5/83).

- f. Emission Limitation: 59.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance may be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$EC(OC)$ = OC emissions from the cleanup materials, in pounds per day.

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene paste mixes and all cleanup materials:

71

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P003

$$\text{EOC}(\text{lbs/day}) = \text{EM}(\text{OC}) + \text{EC}(\text{OC}).$$

- g. Emission Limitation: 10.8 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste mixing operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P003 - Mixer 3 for Polyester resin/styrene paste	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. 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.
- 2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m ³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m ³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m ³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86$ lbs/hr	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P004 - Sheet mold compounding (SMC) machine No. 1	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions shall not exceed 3.3 lbs/hr, excluding emissions from cleanup materials. OC emissions shall not exceed 73.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 13.4 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 40 lbs/day, excluding emissions from non-photochemically reactive cleanup materials. See section A.I.2.c.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.d.

2. Additional Terms and Conditions

- 2.a** The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b** The OC emissions from the compounding operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.c** The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.d** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
 - i. A closed pipeline system shall be employed to transfer polyester resin/styrene paste from any one of the resin paste mixers (P001-P003) to the covered doctor box of this emissions unit.
 - ii. The SMC product must be covered by a nylon film or any film that is equally impermeable to styrene.
 - iii. The edges of rolled SMC product must be folded and covered by a nylon film or any film that is equally impermeable to styrene.

II. Operational Restrictions

- 1. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each resin/styrene resin paste material and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste material employed, in pounds.

- d. The styrene content of each polyester resin/styrene paste material employed, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene paste materials, in pounds.
 - f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene paste materials, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in pounds.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pound per gallon.
 - l. The total OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene paste materials and all cleanup materials, in pounds per day.
2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:
- Process unit: closed pipeline system for resin paste mix feed into a covered doctor box
 Minimum Inspection frequency: every other day
- Process unit: SMC product must be covered by a nylon film or any film that is equally impermeable to styrene.
 Minimum Inspection frequency: once per hour
- Process unit: The edges of rolled SMC product must be folded and covered by a nylon film or any film that is equally impermeable to styrene.
 Minimum Inspection frequency: once per hour
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.

4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 3.3 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 73.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of

each year.

3. The permittee shall submit to the permitting authority (i.e. Northeast District Office, Ohio EPA) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.
4. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority (i.e. Northeast District Office, Ohio EPA) within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that the doctor box on this emissions unit is closed or covered.
 - b. A certified statement in the Notice of Compliance status report that the edges of the SMC are folded prior to storage and/or transport.
 - c. A certified statement in the Notice of Compliance status report that a nylon film or film with an equal or lower permeability to styrene than nylon is used to enclose the SMC.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 3.3 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.
 - b. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste compounding operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.0012 pounds per pound of available OC content, as determined from a Budd Plastics Division study, as presented to the October, 1999 Composite Fabricators Association Conference.

- c. Emission Limitation: 73.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance shall be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$$EC(OC) = \text{OC emissions from the cleanup materials, in pounds per day.}$$

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene mold compounds and all cleanup materials:

$$EOC(\text{lbs/day}) = EM(OC) + EC(OC).$$

- d. Emission Limitation: 13.4 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste compounding operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1c. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P004 - Sheet mold compounding (SMC) machine No. 1	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

- 1. 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.
- 2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour

maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) ($\mu\text{g}/\text{m}^3$)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Acceptable Ground Level Concentration (MAGLC), ($\mu\text{g}/\text{m}^3$)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 \times 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P005 - Bulk mold compound (BMC) mixer 1	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions shall not exceed 0.44 lb/hr and 10.6 lbs/day, excluding emissions from cleanup materials. OC emissions shall not exceed 20.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 3.69 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-28(B). See section A.I.2.a.
	OAC rule 3745-21-07(G)(2)	See section A.I.2.b.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.c.

2. Additional Terms and Conditions

- 2.a The OC emissions from the mix operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.b The emission limitations specified by this rule are less stringent than the emission limitation

established pursuant to OAC rule 3745-31-05(A)(3).

- 2.c** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
- i. A closed pipeline system shall be employed to transfer polyester resin/styrene paste from any one of the resin paste mixers (P001-P003) into the mix vessel of this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The BMC product may be transferred into a bin, which is lined with a nylon film bag, or any film that is equally impermeable to styrene. The BMC product will be immediately sealed in a nylon bag and will remain sealed until use at any mold press associated with P008, P009 or P010.

II. Operational Restrictions

1. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each resin/styrene resin paste material and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste material employed, in pounds.
 - d. The styrene content of each polyester resin/styrene paste material employed, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene paste materials, in pounds.

- f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene paste materials, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in pounds.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pound per gallon.
 - l. The total OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene paste materials and all cleanup materials, in pounds per day.
2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:
- Process unit: closed pipeline system for resin paste mix feed into the mix vessel
 Minimum Inspection frequency: every other day
- Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing
 Minimum Inspection frequency: once per BMC batch produced
- Process unit: immediate sealing of BMC product with a nylon film bag
 Minimum Inspection frequency: once per BMC batch produced
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
 4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
 5. The permittee shall maintain daily records of the following information:

- a. the date and reason any required inspection was not performed; and
- b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 0.44 pound per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 10.6 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 20.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control, Central Office) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.

Emissions Unit ID: P005

4. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps.
 - b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 0.44 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 10.6 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste compounding operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as determined from engineering estimates.

- c. Emission Limitation: 20.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$$EC(OC) = \text{OC emissions from the cleanup materials, in pounds per day.}$$

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene mold compounds and all cleanup materials:

$$EOC(\text{lbs/day}) = EM(OC) + EC(OC).$$

- d. Emission Limitation: 3.69 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste compounding operation and cleanup materials, $EOC(\text{lbs/day})$, as specified in section A.V.1c. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

- 2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P005 - Bulk mold compound (BMC) mixer 1	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Emissions Unit ID: P005

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) ($\mu\text{g}/\text{m}^3$)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Acceptable Ground Level Concentration (MAGLC), ($\mu\text{g}/\text{m}^3$)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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
 - 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.).
4. 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

Emissions Unit ID: P005

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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P006 - Bulk mold compound (BMC) mixer 2	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions shall not exceed 1.10 lb/hr and 26.4 lbs/day, excluding emissions from cleanup materials. OC emissions shall not exceed 36 lbs/day , including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 6.57 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-28(B). See section A.I.2.a.
	OAC rule 3745-21-07(G)(2)	See section A.I.2.b.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.c.

2. Additional Terms and Conditions

- 2.a The OC emissions from the mix operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.b The emission limitations specified by this rule are less stringent than the emission limitation

established pursuant to OAC rule 3745-31-05(A)(3).

- 2.c** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
- i. A closed pipeline system shall be employed to transfer polyester resin/styrene paste from any one of the resin paste mixers (P001-P003) into the mix vessel of this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The BMC product may be transferred into a bin, which is lined with a nylon film bag, or any film that is equally impermeable to styrene. The BMC product will be immediately sealed in a nylon bag and will remain sealed until use at any mold press associated with P008, P009 or P010.

II. Operational Restrictions

1. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each resin/styrene resin paste material and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste material employed, in pounds.
 - d. The styrene content of each polyester resin/styrene paste material employed, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene paste materials, in pounds.

- f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene paste materials, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in pounds.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pound per gallon.
 - l. The total OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene paste materials and all cleanup materials, in pounds per day.
2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:
- Process unit: closed pipeline system for resin paste mix feed into the mix vessel
 Minimum Inspection frequency: every other day
- Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing
 Minimum Inspection frequency: once per BMC batch produced
- Process unit: immediate sealing of BMC product with a nylon film bag
 Minimum Inspection frequency: once per BMC batch produced
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
 4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
 5. The permittee shall maintain daily records of the following information:

- a. the date and reason any required inspection was not performed; and
- b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 1.10 pound per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 26.4 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 36 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control, Central Office) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.

4. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR 63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):
 - a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps..
 - b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 1.10 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 26.4 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste compounding operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

$EF(OC)$ = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as determined from engineering estimates.

- c. Emission Limitation: 36 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$EC(OC) =$ OC emissions from the cleanup materials, in pounds per day.

$V_i =$ the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

$OC_i =$ the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene mold compounds and all cleanup materials:

$EOC(\text{lbs/day}) = EM(OC) + EC(OC).$

- d. Emission Limitation: 6.57 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste compounding operation and cleanup materials, $EOC(\text{lbs/day})$, as specified in section A.V.1c. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P006 - Bulk mold compound (BMC) mixer 2	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Emissions Unit ID: P006

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308		0.75	0.094697	55.4
R003	Ethyl Acetate	1,441,308		0.375	0.047348	19.11
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P007 - Bulk mold compound (BMC) mixer 3	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions shall not exceed 2.20 lb/hr, excluding emissions from cleanup materials. OC emissions shall not exceed 59.2 lbs/day, including emissions from non-photochemically reactive cleanup materials. Total OC emissions shall not exceed 10.0 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the requirements of the daily limit in OAC rule 3745-21-07(G)(2) and the requirements in OAC rule 3745-31-28(B). See section A.I.2.a.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 40 lbs/day, excluding emissions from non-photochemically reactive cleanup materials. See section A.I.2.b.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.c.

2. Additional Terms and Conditions

- 2.a The OC emissions from the mix operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.b The emission limitations specified by this rule are less stringent than the emission limitation

established pursuant to OAC rule 3745-31-05(A)(3).

- 2.c** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions:
- i. A closed pipeline system shall be employed to transfer polyester resin/styrene paste from any one of the resin paste mixers (P001-P003) into the mix vessel of this emissions unit.
 - ii. Immediately after all raw materials have been feed into the mix vessel associated with this emissions unit, the mix vessel cover shall be closed and the exhaust vacuum line shall be closed. The cover and exhaust vacuum line shall remain closed throughout the materials mixing procedure.
 - iii. The BMC product may be transferred into a bin, which is lined with a nylon film bag, or any film that is equally impermeable to styrene. The BMC product will be immediately sealed in a nylon bag and will remain sealed until use at any mold press associated with P008, P009 or P010.

II. Operational Restrictions

1. The use of photochemically reactive cleanup materials is prohibited.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each resin/styrene resin paste material and each cleanup material employed.
 - b. An identification of whether or not each cleanup material employed is a photochemically reactive material.
 - c. The weight of each polyester resin/styrene paste material employed, in pounds.
 - d. The styrene content of each polyester resin/styrene paste material employed, in percent by weight.
 - e. The total OC emission rate for all polyester resin/styrene paste materials, in pounds.

- f. The actual number of hours that the emissions unit was in operation.
 - g. The average hourly OC emission rate for all polyester resin/styrene paste materials, i.e., (e) divided by (f), in pounds per hour (average).
 - h. The volume of each cleanup material dispensed, in gallons.
 - i. The volume of each cleanup material returned, in pounds.
 - j. The volume of each evaporated cleanup material, which is estimated by subtracting the volume of returned cleanup material from the volume of dispensed cleanup material, in gallons per day.
 - k. The OC content of each cleanup material evaporated, in pound per gallon.
 - l. The total OC emission rate for all cleanup materials, in pounds.
 - m. The total OC emission rate for all polyester resin/styrene paste materials and all cleanup materials, in pounds per day.
2. Except as otherwise provided in this section, the permittee shall perform inspections of this emissions unit in accordance with the following frequencies:
- Process unit: closed pipeline system for resin paste mix feed into the mix vessel
Minimum Inspection frequency: every other day
- Process unit: closed mix vessel cover and closed exhaust vacuum line during materials mixing
Minimum Inspection frequency: once per BMC batch produced
- Process unit: immediate sealing of BMC product with a nylon film bag
Minimum Inspection frequency: once per BMC batch produced
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned

applicable requirements.

5. The permittee shall maintain daily records of the following information:
 - a. the date and reason any required inspection was not performed; and
 - b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the polyester resin/styrene pastes exceeded 2.20 pound per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the polyester resin/styrene pastes exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which the OC emissions from the polyester resin/styrene pastes and the cleanup materials exceeded 59.2 pounds per day, and the actual OC emissions for each such day.
 - d. An identification of each day during which any photochemically reactive cleanup materials were employed.
 - e. An identification of each day during which an inspection was not performed by the required frequency.
 - f. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.
3. The permittee shall submit to the permitting authority (i.e. Ohio EPA, Division of Air Pollution Control) an Initial Notification once the Maximum Achievable Control Technology Standard (MACT) for Composite Plastics is promulgated. The Initial Notification shall be submitted in accordance to 40 CFR 63.9(b)(2) and the dates specified within that section.
4. The permittee shall submit a Notification of Compliance status report, in accordance with 40 CFR

63.9 (h), to the permitting authority within 30 days after completion of the relevant compliance demonstration. The Notice of Compliance shall include the following information (in accordance to table 9 of the proposed MACT):

- a. A certified statement in the Notice of Compliance status report that this mixer is equipped with a cover that does not contain any visible gaps..
- b. A certified statement in the Notice of Compliance status report that the mixer cover is closed during mixing except when adding materials to the mixer.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 2.20 lb OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.g. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. Compliance may be determined based upon the following equation:

$$EM(OC) = \text{summation of } (W_i \times OC_i) \times EF(OC)$$

where:

$EM(OC)$ = OC emissions as styrene from the polyester resin/styrene paste compounding operations, in pounds per day.

W_i = the weight of mix "i" produced, in pounds per day.

OC_i = the styrene content of mix "i", in per cent by weight.

Emissions Unit ID: P007

EF(OC) = the emission factor for OC emissions, which is 0.01 pounds per pound of available OC content, as determined from engineering estimates.

- c. Emission Limitation: 59.2 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. Compliance may be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$$EC(OC) = \text{OC emissions from the cleanup materials, in pounds per day.}$$

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.j., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all polyester resin/styrene mold compounds and all cleanup materials:

$$EOC(\text{lbs/day}) = EM(OC) + EC(OC).$$

- d. Emission Limitation: 10.8 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the polyester resin/styrene paste compounding operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1c. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

112

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P007

B. State Only Enforceable Section

I. 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>
P007 - Bulk mold compound (BMC) mixer 3	None	Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Emissions Unit ID: P007

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308		0.75	0.094697	55.4
R003	Ethyl Acetate	1,441,308		0.375	0.047348	19.11
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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

115

Zehrcc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P007

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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P008 - Seven mold presses for fiberglass reinforced plastic parts; Co. ID: Group 1 consists of C1 - 150 ton compression press, C2 - 75 ton compression press, C3- 74 ton compression press, C4 - 100 ton compression press, C5 - 150 ton compression press, C6 - 300 ton compression press and C7 - 300 ton compression press.	OAC rule 3745-05(A)(3)	Organic compound (OC) emissions shall not exceed 1.68 lbs/hr and 7.3 tons/year from the molding operation. The requirements of this rule also include compliance with the daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 40 lbs/day. See section A.I.2.c.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.d.

2. Additional Terms and Conditions

- 2.a The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b The OC emissions from the compounding operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).

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

- 2.d** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions: only one charge of molding compound may be uncovered, unwrapped, or exposed per mold cycle per compression/injection molding press.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each mold compound employed.
 - b. The number of pounds of each mold compound employed.
 - c. The total OC emission rate for all mold compounds employed, in pounds per day.
 - d. The actual number of hours the emissions unit was in operation.
 - e. The average hourly OC emission rate for all mold compounds employed, i.e., (c)/(d), in pounds per hour (average).
2. Except as otherwise provided in this section, the permittee shall perform inspections of molding compound charges at each press associated with this emissions unit on a once per mold cycle basis.
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:

- a. the date and reason any required inspection was not performed; and
- b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the mold compounds exceeded 1.68 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the mold compounds exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which an inspection was not performed by the required frequency.
 - d. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 1.68 lbs OC/hr.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 40 lbs OC/day.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.c. Compliance shall be determined based upon the following equation:

$$E(OC) = \text{summation of } (W_i_MC) \times EF.$$

Where,

$E(OC)$ = daily, OC emissions for all mold compounds, in pounds per day.

W_{i_MC} = the weight of mold compound "i" employed, in pounds per day.

EF = emission factor for styrene emissions from the mold presses, which is 0.00134 pounds per pound of mold compound or wet mix/preform, as determined from a Society of Plastics Industry report, "Styrene Emissions during the Charging and Molding Cycle".

- c. Emission Limitation: 7.3 TPY OC.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the mold compounds, $EOC(\text{lbs/day})$, as specified in section A.V.1.b. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P008 - Seven mold presses for fiberglass reinforced plastic parts; Co. ID: Group 1 consists of C1 - 150 ton compression press, C2 - 75 ton compression press, C3- 74 ton compression press, C4 - 100 ton compression press, C5 - 150 ton compression press, C6 - 300 ton compression press and C7 - 300 ton compression press.		Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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:"

123

Zehrco Plastics Inc

PTI Application: 02 14514

Issued

Facility ID: 0204000441

Emissions Unit ID: P008

- 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.
2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m ³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m ³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m ³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 \times 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P009 - Eight compression mold presses for fiberglass reinforced plastic parts; Co. ID: Group 2 consists of C8 - 300 ton compression press, C9 - 300 ton compression press, C10- 500 ton compression press, C11 - 500 ton compression press, C12 - 700 ton compression press, C13 - 700 ton compression press and C14 - 700 ton compression press and C15 - 600 ton compression press.	OAC rule 3745-05(A)(3)	Organic compound (OC) emissions shall not exceed 2.01 lbs/hr and 7.3 tons/year from the molding operation. The requirements of this rule also include compliance with the daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 40 lbs/day. See section A.I.2.c.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.d.

2. Additional Terms and Conditions

- 2.a The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b The OC emissions from the compounding operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).

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

- 2.d** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions: only one charge of molding compound may be uncovered, unwrapped, or exposed per mold cycle per compression/injection molding press.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each mold compound employed.
 - b. The number of pounds of each mold compound employed.
 - c. The total OC emission rate for all mold compounds employed, in pounds per day.
 - d. The actual number of hours the emissions unit was in operation.
 - e. The average hourly OC emission rate for all mold compounds employed, i.e., (c)/(d), in pounds per hour (average).
2. Except as otherwise provided in this section, the permittee shall perform inspections of molding compound charges at each press associated with this emissions unit on a once per mold cycle basis.
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:

- a. the date and reason any required inspection was not performed; and
- b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the mold compounds exceeded 2.01 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the mold compounds exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which an inspection was not performed by the required frequency.
 - d. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 2.01 lbs OC/hr.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 40 lbs OC/day.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.c. Compliance shall be determined based upon the following equation:

$$E(OC) = \text{summation of } (W_i_MC) \times EF.$$

Where,

$E(OC)$ = daily, OC emissions for all mold compounds, in pounds per day.

W_i_{MC} = the weight of mold compound "i" employed, in pounds per day.

EF = emission factor for styrene emissions from the mold presses, which is 0.00134 pounds per pound of mold compound or wet mix/preform, as determined from a Society of Plastics Industry report, "Styrene Emissions during the Charging and Molding Cycle".

- c. Emission Limitation: 7.3 TPY OC.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the mold compounds, $EOC(\text{lbs/day})$, as specified in section A.V.1.b. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P009 - Eight compression mold presses for fiberglass reinforced plastic parts; Co. ID: Group 2 consists of C8 - 300 ton compression press, C9 - 300 ton compression press, C10- 500 ton compression press, C11 - 500 ton compression press, C12 - 700 ton compression press, C13 - 700 ton compression press and C14 - 700 ton compression press and C15 - 600 ton compression press.		Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect, record, and retain the following information when it conducts

Emissions Unit ID: P009

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.
2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 \times 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P010 - One compression mold press and five injection mold presses for fiberglass reinforced plastic parts; Co. ID: Group 3 consists of C16 - 1200 ton compression press, I1 - 150 ton injection press, I2 - 175 ton injection press, I3 - 250 ton injection press, I4 - 250 ton injection press, and I5 - 500 ton injection press.	OAC rule 3745-05(A)(3)	Organic compound (OC) emissions shall not exceed 2.01 lbs/hr and 7.3 tons/year from the molding operation. The requirements of this rule also include compliance with the daily OC emission limit requirement of OAC rule 3745-21-07(G)(2) and with the requirements of OAC rule 3745-31-28(B). See sections A.I.2.a. and A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 40 lbs/day. See section A.I.2.c.
	OAC rule 3745-31-28(B)	This emissions unit must comply with the MACT determination requirements as specified in section A.I.2.d.

2. Additional Terms and Conditions

- 2.a The requirements of this rule also include compliance with the daily emission limit in OAC rule 3745-21-07(G)(2).
- 2.b The OC emissions from the compounding operations consist of styrene a photochemically reactive material as defined in OAC rule 3745-21-01(C)(5).
- 2.c The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

- 2.d** The following equipment standard(s) or work practice(s) shall be employed to minimize the generation of styrene emissions: only one charge of molding compound may be uncovered, unwrapped, or exposed per mold cycle per compression/injection molding press.

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each mold compound employed.
 - b. The number of pounds of each mold compound employed.
 - c. The total OC emission rate for all mold compounds employed, in pounds per day.
 - d. The actual number of hours the emissions unit was in operation.
 - e. The average hourly OC emission rate for all mold compounds employed, i.e., (c)/(d), in pounds per hour (average).
2. Except as otherwise provided in this section, the permittee shall perform inspections of molding compound charges at each press associated with this emissions unit on a once per mold cycle basis.
3. The purpose of the inspections is to ensure that equipment standard(s) or work practice(s) to minimize styrene emissions are employed. The inspections shall be performed during representative, normal operating conditions.
4. The permittee may, upon receipt of written approval from the Ohio EPA Northeast District Office, modify the above-mentioned inspection frequencies if operating experience indicates that less frequent inspections would be sufficient to ensure compliance with the above-mentioned applicable requirements.
5. The permittee shall maintain daily records of the following information:

- a. the date and reason any required inspection was not performed; and
- b. the dates the equipment standard(s) or work practice(s) were not implemented when the emissions unit was in operation.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day during which the average hourly OC emissions from the mold compounds exceeded 2.01 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day during which the OC emissions from the mold compounds exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day during which an inspection was not performed by the required frequency.
 - d. An identification of each instance when an equipment standard(s) or work practice(s) was not implemented.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 2.01 lbs OC/hr.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.e. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- b. Emission Limitation: 40 lbs OC/day.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.c. Compliance shall be determined based upon the following equation:

$$E(OC) = \text{summation of } (W_i_MC) \times EF.$$

Where,

$E(OC)$ = daily, OC emissions for all mold compounds, in pounds per day.

W_{i_MC} = the weight of mold compound "i" employed, in pounds per day.

EF = emission factor for styrene emissions from the mold presses, which is 0.00134 pounds per pound of mold compound or wet mix/preform, as determined from a Society of Plastics Industry report, "Styrene Emissions during the Charging and Molding Cycle".

- c. Emission Limitation: 7.3 TPY OC.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the mold compounds, $EOC(\text{lbs/day})$, as specified in section A.V.1.b. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 24 as referenced in 40 CFR Part 60, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 24 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P010 - One compression mold press and five injection mold presses for fiberglass reinforced plastic parts; Co. ID: Group 3 consists of C16 - 1200 ton compression press, I1 - 150 ton injection press, I2 - 175 ton injection press, I3 - 250 ton injection press, I4 - 250 ton injection press, and I5 - 500 ton injection press.		Compliance with the Air Toxic Policy as specified in sections B.III.1. to B.III

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS - STYRENE & ETHYL ACETATE						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Styrene	85,000	$(3 \times 1.98) + 3.3 + 0.44 + 1.10 + 2.20 = 12.98$	1.63889	566.5	
P008, P009 & P010	Styrene	85,000	$1.68 + 2.01 + 2.01 = 5.07$	0.719697	112.2	
P001-P010	All Styrene	85,000			678.7	2,029
P001-P007	Ethyl Acetate	1,441,308	$(3 \times 1.2) + 1.66 + 0.4 + 0.4 + 0.8 = 6.86 \text{ lbs/hr}$	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P011 - Paint curing oven No. 1 with a 1.236 mm Btu/hr natural gas fired burner	OAC rule 3745-31-03(A)(3)	Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. Organic compound (OC) emissions shall not exceed 1.60 lbs/hr and 2.74 tons/year from the paint cure operation. The requirements of this rule also include compliance with the daily OC emission limit requirement of OAC rule 3745-21-07(G)(1).
	OAC rule 3745-17-07(B)	See section A.I.2.a.
	OAC rule 3745-21-07(G)(1)	OC emissions shall not exceed 15 lbs/day from the paint cure operation. See section A.I.2.b.

2. Additional Terms and Conditions

- 2.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).
- 2.b The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

1. The permittee shall only burn natural gas fuel in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

1. For purposes of calculating the OC emission rates for this emissions unit and the associated spray booth(s) (R001 or R002), the permittee shall utilize a value of 90% as the maximum percentage of the OCs employed in the spray booth that are emitted uncontrolled from the coating operations at the spray booth. The remaining 10% of the OCs employed in the spray booth, from the coating operations, shall be considered to be the uncontrolled emissions for this emissions unit. This "split" of OC emissions between this emissions unit and the associated spray booth is based engineering estimates.
2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. the total potential (prior to applying the booth/oven "split") uncontrolled daily OC emission rate for all coatings employed in the coating operation associated with this emissions unit, multiplied by the maximum percentage of the emissions associated with this emissions unit (as defined in section A.III.1. of this permit), in pounds per day;
 - b. the total number of hours this emissions unit was in operation (this number should be the same as the number of hours the associated coating operation was in operation); and
 - c. the average hourly OC emission rate, i.e., (a)/(b), in pounds per hour (average).
3. 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 fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. an identification of each day during which the average hourly OC emissions exceeded 1.60 pounds per hour from the paint cure operation, and the actual average hourly OC emissions for each such day; and
 - b. an identification of each day during which the OC emissions exceeded 15 pounds per day from the paint cure operation, and the actual OC emissions for each such day.
2. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of

145

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: P011

each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission limitation: 5% opacity of visible particulate emissions.

Applicable compliance method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 1.60 lbs OC/hr from the paint cure operation.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.2. If required, the permittee shall demonstrate compliance with this emission limitation through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 18, 25 or 25A as appropriate.

- c. Emission Limitation: 15 lbs OC/day from the paint cure operation.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.2. Compliance shall be determined based upon the following equations:

- i. Determination of total potential daily emissions from coatings shall be made in accordance with the following method(s):

$$EPCTG(\text{lbs/day}) = \text{Summation of } (OC_i \times V_i).$$

where:

$EPCTG(\text{lbs/day})$ = the total potential (prior to applying the booth/oven "split") daily OC emissions from coatings, as specified in section A.III.2.a., in pounds per day.

OC_i = the OC content of coating "i", in pounds per gallon of coating as applied.

V_i = the volume of coating "i" employed, in gallons per day.

- ii. Determination of daily emissions from coatings shall be made in accordance with the following method(s):

$$ECTG(\text{lbs/day}) = EPCTG(\text{lbs/day}) \times EF.$$

where:

ECTG(lbs/day) = the daily OC emissions from coatings, in pounds per day.

EF = OC emissions factor from coatings at the oven, which is 0.10 as stated in section A.III.1.

- d. Emission Limitation: 2.74 TPY OC from the paint cure operation.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the curing operation, EOC(lbs/day), as specified in section A.V.1.c. of this permit for the calendar year, and shall be divided by 2000 pounds/ton..

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any thinner to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 311 as referenced in 40 CFR Part 63, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 311 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
P011 - Paint curing oven No. 1 with a 1.236 mm Btu/hr natural gas fired burner		Compliance with the Air Toxic Policy specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.

Emissions Unit ID: P011

2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Ethyl Acetate	1,441,308	6.86	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131
R001, R002 & P011	Cyclohexanone	96,306	13.70	1.729797	1011.93	
R003	Cyclohexanone	96,306	1.71	0.215455	86.96	
R001- R003 & P011	All Cyclohexanone	96,306			1098.8	2,293
R001, R002 & P011	n-Butylacetate	712,656	6.04	0.762626	446.14	
R003	n-Butylacetate	712,656	3.05	0.384292	155.1	
R001- R003 & P011	All n-Butylacetate	712,656			601.24	16,968
R001, R002 & P011	Toluene	188,412	16	2.020202	1,181.8	
R003	Toluene	188,412	8	1.010101	407.7	
R001- R003 & P011	All Toluene	188,412			1,589.5	4,486

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
R001 - Paint spray booth No. 1	OAC rule 3745-31-03(A)(3)	Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. The PE rate shall not exceed 0.05 lb/hr and 0.22 ton/year. Organic compound (OC) emissions shall not exceed 128 lbs/day, including emissions from cleanup materials, whenever exclusively non-photochemically reactive materials are employed. Total OC emissions shall not exceed 23.4 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the OC emission limit requirements of OAC rule 3745-21-07(G)(2). See section A.I.2.a.
	OAC rule 3745-17-07(A)	See section A.I.2.b.
	OAC rule 3745-17-11	See section A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 8 lbs/hr and 40 lbs/day, whenever photochemically reactive coating materials are employed, excluding emissions from cleanup materials.

2. Additional Terms and Conditions

2.a A photochemically reactive material is defined in OAC rule 3745-21-01(C)(5).

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

II. Operational Restrictions

1. The use of photochemically reactive cleanup materials is prohibited.
2. The permittee shall operate the particulate control filter system whenever this emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. For purposes of calculating the OC emission rates from coating operations for this emissions unit and the associated oven (P011), the permittee shall utilize a value of 90% as the maximum percentage of the OCs employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 3% of the OCs from coating operations employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon engineering estimates.
2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each coating and each cleanup material employed.
 - b. Identification of whether or not each coating and each cleanup material employed is a photochemically reactive material.
 - c. The volume of each coating employed, in gallons per day.
 - d. The OC content of each coating and each cleanup material, in pounds per gallon.
 - e. The total potential (prior to applying the booth/oven "split") daily OC emission rate for all coatings, in pounds per day.
 - f. The total potential daily OC emission rate for all coatings multiplied by the maximum

percentage of the emissions associated with this emissions unit (as defined in section A.III.1. of this permit), in pounds per day.

- g. The volume of each cleanup material dispensed, in gallons per day.
 - h. The volume of each cleanup material returned, in gallons per day.
 - i. The volume of each evaporated cleanup material, in gallons per day.
 - j. On any day when any photochemically reactive coating material is employed, the OC emission rate for all coatings, in pounds per day.
 - k. The OC emission rate for all coatings and all cleanup materials, in pounds per day.
 - l. The total number of hours the emissions unit was in operation.
 - m. On any day when any photochemically reactive coating material is employed, the average hourly OC emission rate for all coating materials, i.e., (j)/(l), in pounds per hour.
3. The permittee shall properly operate the particulate control filter system and check it at least once per day when the emissions unit is in operation. The permittee shall record each day all periods of time during which the particulate control filter system was not in operation when the emissions unit was in operation.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day, whenever photochemically reactive coating materials are employed, during which the average hourly OC emissions from the coatings exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day, whenever photochemically reactive coating materials are employed, during which the OC emissions from the coatings exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day, whenever exclusively non-photochemically reactive cleanup materials are employed, during which the OC emissions from the coatings and the cleanup materials exceeded 128 pounds per day, and the actual OC emissions for each such day.

Emissions Unit ID: R001

- d. An identification of each day during which any photochemically reactive cleanup materials were employed.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
3. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: No visible PE shall be permitted.

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.05 lb PE/hr.

Applicable Compliance Method(s): Compliance shall be determined based upon the following equation:

$$E(\text{PE}) = \text{CTG} \times D \times S\% \times (1 - \text{TE}) \times (1 - \text{CE}).$$

where the following applies:

$$E(\text{PE}) = \text{PE}, \text{ in pounds per hour.}$$

CTG = maximum coating usage rate, which is 1 gal CTG/hr.

D = maximum density of coating, which is 11.39 lbs CTG/gal CTG, as noted in the permit application.

S% = maximum solids ratio by weight, 0.662 lbs AVAILABLE SOLIDS/lb CTG, as noted in the permit application.

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used; which is 0.40 for air atomized spray, as noted in AP-42 chapter 4.2.2.11 (5/83).

155

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: R001

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.22 ton PE/year.

Applicable Compliance Method(s): To determine the annual worst case PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by 8760 hrs/yr and divided by 2000 lbs/ton.

- d. Emission Limitation: 8 lbs OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.j. Compliance shall be determined based upon the following equations:

- i. Determination of total potential daily emissions from coatings shall be made in accordance with the following method(s):

$$EPCTG(\text{lbs/day}) = \text{Summation of } (OC_i \times V_i).$$

where:

$EPCTG(\text{lbs/day})$ = the total potential (prior to applying the booth/oven "split") daily OC emissions from coatings, as specified in section A.III.2.e., in pounds per day.

OC_i = the OC content of coating "i", in pounds per gallon of coating as applied.

V_i = the volume of coating "i" employed, in gallons per day.

- ii. Determination of daily emissions from coatings shall be made in accordance with the following method(s):

$$ECTG(\text{lbs/day}) = EPCTG(\text{lbs/day}) \times EF.$$

where:

Emissions Unit ID: R001

ECTG(lbs/day) = the daily OC emissions from coatings, in pounds per day.

EF = OC emissions factor from coatings at the booth, which is 0.90 as stated in section A.III.1.

- f. Emission Limitation: 128 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.k. Compliance shall be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$$EC(OC) = \text{OC emissions from the cleanup materials, in pounds per day.}$$

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.i., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all coating materials and all cleanup materials:

$$EOC(\text{lbs/day}) = ECTG(OC) + EC(OC).$$

- g. Emission Limitation: 23.4 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the coatings operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 311 as referenced in 40 CFR Part 63, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 311 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

158
Zehrc
PTI A₁
Issued: 2/12/2002

Emissions Unit ID: R001

None

B. State Only Enforceable Section

I. 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>
R001 - Paint spray booth No. 1		Compliance with the Air Toxic Policy specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Emissions Unit ID: R001

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m ³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m ³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m ³)
P001-P007	Ethyl Acetate	1,441,308	6.86	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131
R001, R002 & P011	Cyclohexanone	96,306	13.70	1.729797	1011.93	
R003	Cyclohexanone	96,306	1.71	0.215455	86.96	
R001- R003 & P011	All Cyclohexanone	96,306			1098.8	2,293
R001, R002 & P011	n-Butylacetate	712,656	6.04	0.762626	446.14	
R003	n-Butylacetate	712,656	3.05	0.384292	155.1	
R001- R003 & P011	All n-Butylacetate	712,656			601.24	16,968
R001, R002 & P011	Toluene	188,412	16	2.020202	1,181.8	
R003	Toluene	188,412	8	1.010101	407.7	
R001- R003 & P011	All Toluene	188,412			1,589.5	4,486

3. 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.).
- 4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
R002 - Paint spray booth No. 2	OAC rule 3745-31-03(A)(3)	Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. The PE rate shall not exceed 0.05 lb/hr and 0.22 ton/year. Organic compound (OC) emissions shall not exceed 128 lbs/day, including emissions from cleanup materials, whenever exclusively non-photochemically reactive materials are employed. Total OC emissions shall not exceed 23.4 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the OC emission limit requirements of OAC rule 3745-21-07(G)(2). See section A.I.2.a.
	OAC rule 3745-17-07(A)	See section A.I.2.b.
	OAC rule 3745-17-11	See section A.I.2.b.
	OAC rule 3745-21-07(G)(2)	OC emissions shall not exceed 8 lbs/hr and 40 lbs/day, whenever photochemically reactive coating materials are employed, excluding emissions from cleanup materials.

163

Zehrco Plastics Inc

PTI Application: **02 14514**

Issued

Facility ID: **0204000441**

Emissions Unit ID: R002

2. Additional Terms and Conditions

2.a A photochemically reactive material is defined in OAC rule 3745-21-01(C)(5).

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

II. Operational Restrictions

1. The use of photochemically reactive cleanup materials is prohibited.
2. The permittee shall operate the particulate control filter system whenever this emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

1. For purposes of calculating the OC emission rates from coating operations for this emissions unit and the associated oven (P011), the permittee shall utilize a value of 90% as the maximum percentage of the OCs employed in this emissions unit that are emitted uncontrolled from the emissions unit. The remaining 3% of the OCs from coating operations employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated oven. This "split" of organic compound emissions between this emissions unit and the associated oven is based upon engineering estimates.
2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each coating and each cleanup material employed.
 - b. Identification of whether or not each coating and each cleanup material employed is a photochemically reactive material.
 - c. The volume of each coating employed, in gallons per day.
 - d. The OC content of each coating and each cleanup material, in pounds per gallon.
 - e. The total potential (prior to applying the booth/oven "split") daily OC emission rate for all coatings, in pounds per day.
 - f. The total potential daily OC emission rate for all coatings multiplied by the maximum

percentage of the emissions associated with this emissions unit (as defined in section A.III.1. of this permit), in pounds per day.

- g. The volume of each cleanup material dispensed, in gallons per day.
 - h. The volume of each cleanup material returned, in gallons per day.
 - i. The volume of each evaporated cleanup material, in gallons per day.
 - j. On any day when any photochemically reactive coating material is employed, the OC emission rate for all coatings, in pounds per day.
 - k. The OC emission rate for all coatings and all cleanup materials, in pounds per day.
 - l. The total number of hours the emissions unit was in operation.
 - m. On any day when any photochemically reactive coating material is employed, the average hourly OC emission rate for all coating materials, i.e., (j)/(l), in pounds per hour.
3. The permittee shall properly operate the particulate control filter system and check it at least once per day when the emissions unit is in operation. The permittee shall record each day all periods of time during which the particulate control filter system was not in operation when the emissions unit was in operation.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day, whenever photochemically reactive coating materials are employed, during which the average hourly OC emissions from the coatings exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day, whenever photochemically reactive coating materials are employed, during which the OC emissions from the coatings exceeded 40 pounds per day, and the actual OC emissions for each such day.
 - c. An identification of each day, whenever exclusively non-photochemically reactive cleanup materials are employed, during which the OC emissions from the coatings and the cleanup materials exceeded 128 pounds per day, and the actual OC emissions for each such day.

Emissions Unit ID: R002

- d. An identification of each day during which any photochemically reactive cleanup materials were employed.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
3. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:

- a. Emission Limitation: 5% opacity of visible particulate emissions.

Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).

- b. Emission Limitation: 0.05 lb PE/hr.

Applicable Compliance Method(s): Compliance shall be determined based upon the following equation:

$$E(PE) = CTG \times D \times S\% \times (1-TE) \times (1 - CE).$$

where the following applies:

$$E(PE) = PE, \text{ in pounds per hour.}$$

CTG = maximum coating usage rate, which is 1 gal CTG/hr.

D = maximum density of coating, which is 11.39 lbs CTG/gal CTG, as noted in the permit application.

S% = maximum solids ratio by weight, 0.662 lbs AVAILABLE SOLIDS/lb CTG, as noted in the permit application.

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used; which is 0.40 for air atomized spray, as noted in AP-42 chapter 4.2.2.11 (5/83).

167

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: R002

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.22 ton PE/year.

Applicable Compliance Method(s): To determine the annual worst case PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by 8760 hrs/yr and divided by 2000 lbs/ton.

- d. Emission Limitation: 8 lbs OC/hr, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.m. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, excluding emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.j. Compliance shall be determined based upon the following equations:

- i. Determination of total potential daily emissions from coatings shall be made in accordance with the following method(s):

$$EPCTG(\text{lbs/day}) = \text{Summation of } (OC_i \times V_i).$$

where:

$EPCTG(\text{lbs/day})$ = the total potential (prior to applying the booth/oven "split") daily OC emissions from coatings, as specified in section A.III.2.e., in pounds per day.

OC_i = the OC content of coating "i", in pounds per gallon of coating as applied.

V_i = the volume of coating "i" employed, in gallons per day.

- ii. Determination of daily emissions from coatings shall be made in accordance with the following method(s):

$$ECTG(\text{lbs/day}) = EPCTG(\text{lbs/day}) \times EF.$$

where:

Emissions Unit ID: R002

ECTG(lbs/day) = the daily OC emissions from coatings, in pounds per day.

EF = OC emissions factor from coatings at the booth, which is 0.90 as stated in section A.III.1.

- f. Emission Limitation: 128 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.k. Compliance shall be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

$$EC(OC) = \text{OC emissions from the cleanup materials, in pounds per day.}$$

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.i., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all coating materials and all cleanup materials:

$$EOC(\text{lbs/day}) = ECTG(OC) + EC(OC).$$

- g. Emission Limitation: 23.4 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the coatings operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 311 as referenced in 40 CFR Part 63, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 311 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

170
Zehrc
PTI A₁
Issued: 2/12/2002

Emissions Unit ID: R002

None

B. State Only Enforceable Section

I. 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>
R002 - Paint spray booth No. 2		Compliance with the Air Toxic Policy specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the

Emissions Unit ID: R002

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 SCREEN3 model. The predicted 1-hour maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) (µg/m³)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration (µg/m³)	Maximum Acceptable Ground Level Concentration (MAGLC), (µg/m³)
P001-P007	Ethyl Acetate	1,441,308	6.86	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131
R001, R002 & P011	Cyclohexanone	96,306	13.70	1.729797	1011.93	
R003	Cyclohexanone	96,306	1.71	0.215455	86.96	
R001- R003 & P011	All Cyclohexanone	96,306			1098.8	2,293
R001, R002 & P011	n-Butylacetate	712,656	6.04	0.762626	446.14	
R003	n-Butylacetate	712,656	3.05	0.384292	155.1	
R001- R003 & P011	All n-Butylacetate	712,656			601.24	16,968
R001, R002 & P011	Toluene	188,412	16	2.020202	1,181.8	
R003	Toluene	188,412	8	1.010101	407.7	
R001- R003 & P011	All Toluene	188,412			1,589.5	4,486

3. 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.).
- 4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	OAC rule 3745-21-07(G)(2)
R003 - Paint spray booth No. 3 with a paint cure operation	OAC rule 3745-31-03(A)(3)	
	OAC rule 3745-17-07(A)	
	OAC rule 3745-17-11	
	OAC rule 3745-21-07(G)(1)	

Applicable Emissions
Limitations/Control
Measures

Visible particulate emissions (PE) shall not exceed 5% opacity, as a six-minute average. The PE rate shall not exceed 0.05 lb/hr and 0.22 ton/year. Organic compound (OC) emissions shall not exceed 128 lbs/day from the paint spray operations, including emissions from cleanup materials, whenever exclusively non-photochemically reactive materials are employed. OC emissions shall not exceed 0.80 lb/hr from the cure operation. Total OC emissions shall not exceed 26.2 tons/year, including emissions from any cleanup materials. The requirements of this rule also include compliance with the daily OC emission limit requirement of OAC rule 3745-21-07(G)(1) and with the OC emission limit requirements of OAC rule 3745-21-07(G)(2). See section A.I.2.a.

See section A.I.2.b.

See section A.I.2.b.

OC emissions shall not exceed 15 lbs/day from the cure operation. See section A.I.2.c.

OC emissions shall not exceed 8 lbs/hr and 40 lbs/day, whenever photochemically reactive coating materials are employed, excluding emissions from cleanup materials.

2. Additional Terms and Conditions

- 2.a** A photochemically reactive material is defined in OAC rule 3745-21-01(C)(5).
- 2.b** 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.c** The hourly emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

II. Operational Restrictions

- 1. The use of photochemically reactive cleanup materials is prohibited.
- 2. The permittee shall operate the particulate control filter system whenever this emissions unit is in operation.

III. Monitoring and/or Recordkeeping Requirements

- 1. For purposes of calculating the OC emission rates from the spray coating operations for this emissions unit and the associated cure operation, the permittee shall utilize a value of 90% as the maximum percentage of the OCs employed in this emissions unit that are emitted uncontrolled from the spray coating operation. The remaining 3% of the OCs from coating operations employed in this emissions unit shall be considered to be the uncontrolled emissions for the associated cure operation. This "split" of organic compound emissions between the spray coating operation and the associated curing operation is based upon engineering estimates.
- 2. The permittee shall collect and record the following information for each day for this emissions unit:
 - a. The company identification for each coating and each cleanup material employed.
 - b. Identification of whether or not each coating and each cleanup material employed is a photochemically reactive material.
 - c. The volume of each coating employed, in gallons per day.
 - d. The OC content of each coating and each cleanup material, in pounds per gallon.
 - e. The total potential (prior to applying the booth/oven "split") daily OC emission rate for all

coatings, in pounds per day.

- f. The total potential daily OC emission rate for all coatings multiplied by the maximum percentage of the emissions associated with this emissions unit (as defined in section A.III.1. of this permit), in pounds per day.
 - g. The volume of each cleanup material dispensed, in gallons per day.
 - h. The volume of each cleanup material returned, in gallons per day.
 - i. The volume of each evaporated cleanup material, in gallons per day.
 - j. On any day when any photochemically reactive coating material is employed, the OC emission rate for all coatings, in pounds per day.
 - k. The OC emission rate for all coatings and all cleanup materials, in pounds per day.
 - l. The total number of hours the spray coating operation was employed.
 - m. The total number of hours the curing operation was employed.
 - n. On any day when any photochemically reactive coating material is employed, the average hourly OC emission rate for all coating materials, i.e., (j)/(l), in pounds per hour.
3. The permittee shall properly operate the particulate control filter system and check it at least once per day when the emissions unit is in operation. The permittee shall record each day all periods of time during which the particulate control filter system was not in operation when the emissions unit was in operation.

IV. Reporting Requirements

- 1. The permittee shall submit quarterly deviation (excursion) reports which include the following information:
 - a. An identification of each day, whenever photochemically reactive coating materials are employed, during which the average hourly OC emissions from the spray coating operation exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day.
 - b. An identification of each day, whenever photochemically reactive coating materials are

Emissions Unit ID: R003

employed, during which the OC emissions from the spray coating operation exceeded 40 pounds per day, and the actual OC emissions for each such day.

- c. An identification of each day, whenever exclusively non-photochemically reactive cleanup materials are employed, during which the OC emissions from the spray coating operation and the cleanup materials exceeded 128 pounds per day, and the actual OC emissions for each such day.
 - d. an identification of each day during which the average hourly OC emissions from the cure operation exceeded 0.80 pounds per hour, and the actual average hourly OC emissions for each such day; and
 - e. an identification of each day during which the OC emissions from the cure operation exceeded 15 pounds per day, and the actual OC emissions for each such day.
 - f. An identification of each day during which any photochemically reactive cleanup materials were employed.
2. The permittee shall notify the Northeast District Office in writing of any daily record showing that the particulate control filter was not in service when the emissions unit was in operation. The notification shall include a copy of such record and shall be sent to the Northeast District Office within 30 days after the event occurs.
 3. The permittee shall submit annual reports which specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

V. Testing Requirements

1. Compliance with the allowable emission limitations in section A.I.1. of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation: 5% opacity of visible particulate emissions.

 Applicable Compliance Method: Compliance shall be determined based upon OAC rule 3745-17-03(B)(1).
 - b. Emission Limitation: 0.05 lb PE/hr.

 Applicable Compliance Method(s): Compliance shall be determined based upon the following equation:

$$E(PE) = CTG \times D \times S\% \times (1-TE) \times (1 - CE).$$

where the following applies:

$E(\text{PE}) = \text{PE}$, in pounds per hour.

CTG = maximum coating usage rate, which is 1 gal CTG/hr.

D = maximum density of coating, which is 11.39 lbs CTG/gal CTG, as noted in the permit application.

S% = maximum solids ratio by weight, 0.662 lbs AVAILABLE SOLIDS/lb CTG, as noted in the permit application.

TE = transfer efficiency, which is the ratio of the amount of coating solids deposited on the coated part to the amount of coating solids used; which is 0.40 for air atomized spray, as noted in AP-42 chapter 4.2.2.11 (5/83).

CE = efficiency of PE control device, 0.99 pounds of controlled PE per pound of uncontrolled PE, as specified in the permit application.

If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-5.

- c. Emission Limitation: 0.22 ton PE/year.

Applicable Compliance Method(s): To determine the annual worst case PE rate, the worst case hourly rate, as determined from the equation as noted in section A.V.1.b., shall be multiplied by 8760 hrs/yr and divided by 2000 lbs/ton.

- d. Emission Limitation: 8 lbs OC/hr, from the spray coating operation, excluding emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.n. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate, or an equivalent alternate method as approved by Ohio EPA.

- e. Emission Limitation: 40 lbs OC/day, from the spray coating operation, excluding emissions from the cleanup materials.

Emissions Unit ID: R003

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.j. Compliance shall be determined based upon the following equations:

- i. Determination of total potential daily emissions from coatings shall be made in accordance with the following method(s):

$$EPCTG(\text{lbs/day}) = \text{Summation of } (OC_i \times V_i).$$

where:

EPCTG(lbs/day) = the total potential (prior to applying the booth/oven "split") daily OC emissions from coatings, as specified in section A.III.2.e., in pounds per day.

OC_i = the OC content of coating "i", in pounds per gallon of coating as applied.

V_i = the volume of coating "i" employed, in gallons per day.

- ii. Determination of daily emissions from coatings shall be made in accordance with the following method(s):

$$ECTG(\text{lbs/day}) = EPCTG(\text{lbs/day}) \times EF.$$

where:

ECTG(lbs/day) = the daily OC emissions from coatings, in pounds per day.

EF = OC emissions factor from coatings at the booth, which is 0.90 as stated in section A.III.1.

- f. Emission Limitation: 141.5 lbs OC/day, including emissions from the cleanup materials.

Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section A.III.1.k. Compliance shall be determined based upon the following equations:

- i. Determination of OC emissions for all cleanup materials:

$$EC(OC) = \text{summation of } (V_i \times OC_i)$$

Where the following applies:

EC(OC) = OC emissions from the cleanup materials, in pounds per day.

V_i = the volume of evaporated cleanup material, as specified in section A.III.1.i., in gallons per day.

OC_i = the OC content of cleanup material "i", in per pounds per gallon.

- ii. Determination of total OC emissions for all coating materials and all cleanup materials:

182

Zehrc

PTI A₁

Issued: 2/12/2002

Emissions Unit ID: R003

$$EOC(\text{lbs/day}) = ECTG(OC) + EC(OC).$$

- g. Emission Limitation: 25.8 TPY OC, including emissions from cleanup materials.

Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates from the coatings operation and cleanup materials, EOC(lbs/day), as specified in section A.V.1.f. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

2. Any determination of OC content (percent by weight), solids content, or density of a material shall be based on the material as employed, including the addition of any monomer to the material. The permittee shall determine the composition of the material by formulation data supplied by the manufacturer or from data determined by an analysis of each material, as employed, by U.S. EPA Reference Method 311 as referenced in 40 CFR Part 63, Appendix A. If formulation data is employed, the Ohio EPA may require the permittee to have a Reference Method 311 analysis or an equivalent, alternative method (as approved by Ohio EPA) performed on the material(s).

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. 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>
R003 - Paint spray booth No. 3 with a paint cure operation		Compliance with the Air Toxic Policy specified in sections B.III.1. to B.III.4.

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

1. 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.
2. The permit to install for this emissions unit was evaluated based on the actual 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 SCREEN3 model. The predicted 1-hour

maximum ground-level concentration from the use of the dispersion models was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

AIR TOXIC ANALYSIS						
Emission Unit(s) ID	Pollutant	Threshold Limit Value (TLV) ($\mu\text{g}/\text{m}^3$)	Maximum Emission Rate (lbs/hr)	Maximum Emission Rate (g/sec)	Predicted 1 Hour Maximum Ground Level Concentration ($\mu\text{g}/\text{m}^3$)	Maximum Acceptable Ground Level Concentration (MAGLC), ($\mu\text{g}/\text{m}^3$)
P001-P007	Ethyl Acetate	1,441,308	6.86	0.86616	299.4	
R001 & R002	Ethyl Acetate	1,441,308	0.75	0.094697	55.4	
R003	Ethyl Acetate	1,441,308	0.375	0.047348	19.11	
P001-P007 & R001-R003	All Ethyl Acetate	1,441,308			373.91	144,131
R001, R002 & P011	Cyclohexanone	96,306	13.70	1.729797	1011.93	
R003	Cyclohexanone	96,306	1.71	0.215455	86.96	
R001- R003 & P011	All Cyclohexanone	96,306			1098.8	2,293
R001, R002 & P011	n-Butylacetate	712,656	6.04	0.762626	446.14	
R003	n-Butylacetate	712,656	3.05	0.384292	155.1	
R001- R003 & P011	All n-Butylacetate	712,656			601.24	16,968
R001, R002 & P011	Toluene	188,412	16	2.020202	1,181.8	
R003	Toluene	188,412	8	1.010101	407.7	
R001- R003 & P011	All Toluene	188,412			1,589.5	4,486

3. 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.).
4. 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.

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None