



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

12/6/2010

RICHARD NICKELS
Tencom, Ltd.
7134 Railroad Street
Holland, OH 43528

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL AND OPERATE

Facility ID: 0448002099
Permit Number: P0107132
Permit Type: Renewal
County: Lucas

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
Yes	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Kevin Boyce," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

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

If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. This permit can be accessed electronically on the DAPC Web page, www.epa.ohio.gov/dapc, by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

Cc: TDES



FINAL

**Division of Air Pollution Control
Permit-to-Install and Operate
for
Tencom, Ltd.**

Facility ID: 0448002099
Permit Number: P0107132
Permit Type: Renewal
Issued: 12/6/2010
Effective: 12/6/2010
Expiration: 12/6/2015



Division of Air Pollution Control
Permit-to-Install and Operate
for
Tencom, Ltd.

Table of Contents

Authorization 1
A. Standard Terms and Conditions 4
1. What does this permit-to-install and operate ("PTIO") allow me to do?..... 5
2. Who is responsible for complying with this permit? 5
3. What records must I keep under this permit? 5
4. What are my permit fees and when do I pay them?..... 5
5. When does my PTIO expire, and when do I need to submit my renewal application? 5
6. What happens to this permit if my project is delayed or I do not install or modify my source? 6
7. What reports must I submit under this permit? 6
8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit? 6
9. What are my obligations when I perform scheduled maintenance on air pollution control equipment? ... 6
10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report? 6
11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located? 7
12. What happens if one or more emissions units operated under this permit is/are shut down permanently? 7
13. Can I transfer this permit to a new owner or operator?..... 7
14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"? 7
15. What happens if a portion of this permit is determined to be invalid? 8
B. Facility-Wide Terms and Conditions..... 9
C. Emissions Unit Terms and Conditions 11
1. P004 12
2. P013 23
3. Emissions Unit Group - pultrusion group 2: P005, P006, P007 47
4. Emissions Unit Group - pultrusion_group 1: P003, P008, P009, P010, P011, P012..... 58

Authorization

Facility ID: 0448002099
Application Number(s): M0001022
Permit Number: P0107132
Permit Description: Administrative modification to include the requirements of OAC rule 3745-21-25
Permit Type: Renewal
Permit Fee: \$0.00
Issue Date: 12/6/2010
Effective Date: 12/6/2010
Expiration Date: 12/6/2015
Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

Tecom, Ltd.
7134 Railroad Street
Holland, OH 43528

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

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

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Chris Korleski
Director



Authorization (continued)

Permit Number: P0107132
Permit Description: Administrative modification to include the requirements of OAC rule 3745-21-25

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID: P004
Company Equipment ID: P004
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P013
Company Equipment ID: P013
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Group Name: mixers

Emissions Unit ID: P001
Company Equipment ID: P001
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P002
Company Equipment ID: P002
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Group Name: pultrusion group 2

Emissions Unit ID: P005
Company Equipment ID: P005
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P006
Company Equipment ID: P006
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P007
Company Equipment ID: P007
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Group Name: pultrusion_group 1

Emissions Unit ID: P003
Company Equipment ID: P003
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P008
Company Equipment ID: P008
Superseded Permit Number: P0088066
General Permit Category and Type: Not Applicable

Emissions Unit ID: P009

Final Permit-to-Install and Operate

Tencom, Ltd.

Permit Number: P0107132

Facility ID: 0448002099

Effective Date: 12/6/2010

Company Equipment ID:	P009
Superseded Permit Number:	P0088066
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P010
Company Equipment ID:	P010
Superseded Permit Number:	P0088066
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P011
Company Equipment ID:	P011
Superseded Permit Number:	P0088066
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P012
Company Equipment ID:	P012
Superseded Permit Number:	P0088066
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

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

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

2. Who is responsible for complying with this permit?

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

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

3. What records must I keep under this permit?

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

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

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

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

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

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. Unless otherwise specified, facilities subject to one or more synthetic minor restrictions must use Ohio EPA's "Air Services" to submit annual emissions associated with this permit requirement. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

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

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

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

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

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

7. What reports must I submit under this permit?

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

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

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

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

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

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

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

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the Toledo Department of Environmental Services in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that

exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

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

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

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

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

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

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting¹ a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emissions unit once the certification has been submitted to Ohio EPA by the authorized official.

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

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

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

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

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

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated

¹ Permittees that use Ohio EPA's "Air Services" can mark the affected emissions unit(s) as "permanently shutdown" in the facility profile along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

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

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

B. Facility-Wide Terms and Conditions

Final Permit-to-Install and Operate

Tencom, Ltd.

Permit Number: P0107132

Facility ID: 0448002099

Effective Date: 12/6/2010

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

C. Emissions Unit Terms and Conditions

1. P004

Operations, Property and/or Equipment Description:

Pultrusion Line 1-2 Fiberglass Resin Composite Antennas

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. d)(5) through d)(8) and e)(2)f.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01441, issued 4/20/2006)	Organic compound (OC) emissions, excluding emissions from non-photochemically reactive clean-up materials, shall not exceed 0.36 lb/hr, 8.72 lbs/day and 1.59 tons/year. See b)(2)a. Total OC emissions from clean-up materials from the entire facility shall not exceed 792 lbs/month and 4.75 tons/year. See c)(1) and c)(2).
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-31-05(E)	See b)(2)c. through b)(2)e.
d.	OAC rule 3745-21-07(G)(2)	See b)(2)f. and b)(2)g.
e.	OAC rule 3745-21-25(A)(2)(e)	Exemption from the control of VOC emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)h.
f.	ORC 3704.03(F)(4)(c)	See d)(5) through d)(8).

(2) Additional Terms and Conditions

- a. The OC emissions from the process consists of styrene, a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- b. The combined emissions of hazardous air pollutants (HAP) from all emissions units at this facility shall not exceed 9.9 tons per year of individual HAP and 24.9 tons per year of total HAP, based upon a rolling, 12-month summation of the monthly emissions.
- c. The emissions of volatile organic compounds (VOC) for all reinforced plastic composites production operations located at this facility, excluding emissions from clean-up materials, shall not exceed 9.9 tons per year.
- d. The maximum resin usage for all reinforced plastic composites production operations located at this facility, combined, shall not exceed 672 tons per year.
- e. The maximum VOC content for all resins utilized in reinforced plastic composites production operations shall not exceed 36.81 percent by weight.
- f. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)d., b)(2)a., b)(2)g., c)(1), d)(2)b., and e)(1)a.ii.
- h. This emissions unit is exempt from the requirements of OAC rule 3745-21-25 except for the recordkeeping requirements specified under OAC rule 3745-21-25(E) for the procedure to determine VOC emissions factors and monomer content of resins and gel coats.

c) Operational Restrictions

- (1) The permittee shall use only non-photochemically reactive material (e.g., acetone) for cleanup of this emissions unit.

- (2) The permittee shall use only non-hazardous air pollutant material for cleanup of this emissions unit.

d) 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 employed;
 - b. the weight of each resin employed, in pounds;
 - c. the OC content of each resin employed, in percent by weight;
 - d. the total OC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)b., in pounds per day;
 - e. the actual number of hours that the emissions unit was in operation; and
 - f. the average, hourly OC emission rate for all resins employed (e.g., styrene), calculated in compliance with the procedure in f)(1)a., in pounds per hour.

The daily and hourly (average) OC emissions rates shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (2) The permittee shall collect and record the following information for each month (total facility-wide):
- a. the company identification for each cleanup material employed;
 - b. an identification of whether or not each cleanup material employed is photochemically reactive;
 - c. an identification of whether or not each clean-up material employed contains a HAP;
 - d. the volume of each cleanup material applied, in gallons;
 - e. the OC content of each cleanup material applied, in pounds per gallon;
 - f. the total OC emission rate for each cleanup material, calculated in compliance with the procedure in f)(1)d., in pounds per month; and
 - g. the combined total OC emission rate from all cleanup materials employed at this facility, in pounds per month (= usage, all is assumed to evaporate).

The monthly OC emission rate shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (3) The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each resin employed;
 - b. the individual HAP content for each HAP of each resin, in weight percent, of individual HAP;
 - c. the total combined HAP content of each resin, in weight percent of combined HAPs (sum all the individual HAP contents from b.);
 - d. the number of tons of each resin employed, in tons per month and tons per rolling, 12-month period;
 - e. the total individual HAP emissions from all resins employed, calculated in compliance with the procedure in f)(1)f., in tons per rolling, 12-month period; and
 - f. the total combined HAP emissions from all resins, in tons per rolling, 12-month period; calculated in compliance with the procedure in f)(1)g.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Toledo Division of Environmental Services. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

- (4) The permittee shall collect and record the following information for each month for this emissions unit:
- a. the company identification for each resin employed;
 - b. the weight of each resin employed, in pounds;
 - c. the weight of all resins employed, in tons per month and tons per year,
 - d. the VOC content of each resin employed, in percent by weight; and
 - e. the total VOC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)h., in pounds per month and tons per year.
- (5) The FEPTIO application for this emissions unit, P004, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 15.51

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 775

MAGLC (ug/m³): 2028.6

The permittee, has demonstrated that emissions of styrene, from emissions unit P004, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

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

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (9) The permittee shall retain a copy of all records on-site, including calculations and supporting information for at least 5 years.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. an identification of each day during which the average hourly styrene emissions, excluding cleanup materials, from this emissions unit exceeded 0.36 lb/hr, and the actual average hourly OC emissions for each such day;
 - ii. an identification of each month during which any photochemically reactive cleanup materials were employed, and the actual OC and individual HAP emissions for each such month;
 - iii. an identification of each month during which any HAP containing clean-up material was employed, and the actual OC and individual HAP emissions for each such month; and
 - iv. all exceedances of the rolling, 12-month emission limitation for each individual HAP and total of all HAPs.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September),

unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

The permittee shall provide in the required annual permit evaluation report:

- a. an identification of each day during which the OC emissions, excluding cleanup materials, from this emissions unit exceeded 8.72 lbs/day, and the actual OC emissions for each such day;
 - b. an identification of each month during which the combined OC emissions, from cleanup materials from all emissions units located at this facility, exceeded 792 lbs/month facility-wide, and the actual OC emissions from cleanup materials for each such month;
 - c. all exceedances of the annual emission limitation for VOCs;
 - d. all exceedances of the annual limitation for resin usage;
 - e. all exceedances of the limitation for maximum resin VOC content; and
 - f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.
- (3) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

f) Testing Requirements

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

- a. Emission Limitation:

0.36 lb/hr of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

$E_{OC_{ave}} = \text{summation of } (W_i \times OC_i \times EF_{OC_i} \div H)$ for all resins employed

where:

E_{OCave} = OC emissions from all resin operations, in pounds per hour;

H = hours per day of operation, as recorded in d)(1)e.;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OCi} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

b. Emission Limitation:

8.72 lbs/day of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E_{OCd} = summation of ($W_i \times OC_i \times EF_{OCi}$) for all resins employed

where:

E_{OCd} = OC emissions as from all resin operations, in pounds per day;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OCi} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

c. Emission Limitation:

1.59 tons/year of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

This limitation was established by multiplying the 8.72 pounds per day emission rate by the maximum operating days of 365 and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

792 lbs/month of OC, from cleanup materials facility-wide

Applicable Compliance Method:

Compliance shall be demonstrated based upon the following equation:

EC_{OCm} = summation of $(V_i \times OC_i)$ for all cleanup materials employed

where:

EC_{OCm} = OC emissions from the cleanup materials, in pounds per month;

V_i = the volume of cleanup material applied, as recorded in d)(2)d., in gallons per month; and

OC_i = the OC content of cleanup material i, as recorded in d)(2)e., in pounds per gallon.

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound content cleanup materials employed.

e. Emission Limitation:

4.75 tons/year of OC, from cleanup materials facility-wide

Applicable Compliance Method:

This limitation was established by multiplying the 792 pounds per month emission rate by a maximum number of twelve months and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

9.9 tons/year as a rolling, 12-month summation of individual HAP for the facility

Applicable Compliance Method:

$E_{HAP} = (W_i \times HAP_i \times EF_{HAP})$

where:

E_{HAP} = emissions of each individual HAP all resin operations, in tons per year;

W_i = the weight of each resin employed, as recorded in d)(3)d., in tons per year;

HAP_i = the individual HAP content of each resin, as recorded in d)(3)b., in percent by weight; and

$EF_{HAP} = 0.04$ (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: The testing and evaluation requirements contained in 40 CFR part 63, subpart SS, and 63.5850 shall be used to determine organic HAP emission factors for any operation.

g. Emission Limitation:

24.9 tons/year as a rolling, 12-month summation of total, combined HAP for the facility

Applicable Compliance Method:

Compliance may be demonstrated as a summation of the individual HAP emissions calculated by f)(1)f.

h. Emission Limitation:

9.9 tons/year of VOC emissions for all reinforced plastic composites production operations located at this facility, excluding clean-up materials

Applicable Compliance Method:

This limitation was established by multiplying the 672 tons per year of resin utilization by a maximum resin VOC content of 36.81 tons of VOC per 100 tons of resin and multiplying by 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)). Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

Note: VOC content and emissions factors shall be determined in accordance with the methods and procedures of OAC rule 3745-21-25.

g) Miscellaneous Requirements

(1) None.

2. P013

Operations, Property and/or Equipment Description:

Pultrusion Line 2-5 Fiberglass Resin Composite CB Antennas

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
 - (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
 - a. d)(5) through d)(8) and e)(2)f.
 - (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
 - a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01441, issued 4/20/2006)	Organic compound (OC) emissions, excluding emissions from non-photochemically reactive clean-up materials, shall not exceed 0.19 lb/hr, 4.56 lbs/day and 0.83 ton/year. See b)(2)a. Total OC emissions from clean-up materials from the entire facility shall not exceed 792 lbs/month and 4.75 tons/year. See c)(1) and c)(2).
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-31-05(E)	See b)(2)c. through b)(2)e.
d.	OAC rule 3745-21-07(G)(2)	See b)(2)f. and b)(2)g.
e.	OAC rule 3745-21-25(A)(2)(e)	Exemption from the control of VOC emissions.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)h.
f.	ORC 3704.03(F)(4)(c)	See d)(5) through d)(8).

(2) Additional Terms and Conditions

- a. The OC emissions from the process consists of styrene, a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- b. The combined emissions of hazardous air pollutants (HAP) from all emissions units at this facility shall not exceed 9.9 tons per year of individual HAP and 24.9 tons per year of total HAP, based upon a rolling, 12-month summation of the monthly emissions.
- c. The emissions of volatile organic compounds (VOC) for all reinforced plastic composites production operations located at this facility, excluding emissions from clean-up materials, shall not exceed 9.9 tons per year.
- d. The maximum resin usage for all reinforced plastic composites production operations located at this facility, combined, shall not exceed 672 tons per year.
- e. The maximum VOC content for all resins utilized in reinforced plastic composites production operations shall not exceed 36.81 percent by weight.
- f. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

 b)(1)d., b)(2)a., b)(2)g., c)(1), d)(2)b., and e)(1)a.ii.
- h. This emissions unit is exempt from the requirements of OAC rule 3745-21-25 except for the recordkeeping requirements specified under OAC rule 3745-21-25(E) for the procedure to determine VOC emissions factors and monomer content of resins and gel coats.

c) Operational Restrictions

- (1) The permittee shall use only non-photochemically reactive material (e.g., acetone) for cleanup of this emissions unit.

- (2) The permittee shall use only non-hazardous air pollutant material for cleanup of this emissions unit.

d) **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 employed;
 - b. the weight of each resin employed, in pounds;
 - c. the OC content of each resin employed, in percent by weight;
 - d. the total OC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)b., in pounds per day;
 - e. the actual number of hours that the emissions unit was in operation; and
 - f. the average, hourly OC emission rate for all resins employed (e.g., styrene), calculated in compliance with the procedure in f)(1)a., in pounds per hour.

The daily and hourly (average) OC emissions rates shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (2) The permittee shall collect and record the following information for each month (total facility-wide):
- a. the company identification for each cleanup material employed;
 - b. an identification of whether or not each cleanup material employed is photochemically reactive;
 - c. an identification of whether or not each clean-up material employed contains a HAP;
 - d. the volume of each cleanup material applied, in gallons;
 - e. the OC content of each cleanup material applied, in pounds per gallon;
 - f. the total OC emission rate for each cleanup material, calculated in compliance with the procedure in f)(1)d., in pounds per month; and
 - g. the combined total OC emission rate from all cleanup materials employed at this facility, in pounds per month (= usage, all is assumed to evaporate).

The monthly OC emission rate shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (3) The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each resin employed;
 - b. the individual HAP content for each HAP of each resin, in weight percent, of individual HAP;
 - c. the total combined HAP content of each resin, in weight percent of combined HAPs (sum all the individual HAP contents from b.);
 - d. the number of tons of each resin employed, in tons per month and tons per rolling, 12-month period;
 - e. the total individual HAP emissions from all resins employed, calculated in compliance with the procedure in f)(1)f., in tons per rolling, 12-month period; and
 - f. the total combined HAP emissions from all resins, in tons per rolling, 12-month period; calculated in compliance with the procedure in f)(1)g.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Toledo Division of Environmental Services. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

- (4) The permittee shall collect and record the following information for each month for this emissions unit:
- a. the company identification for each resin employed;
 - b. the weight of each resin employed, in pounds;
 - c. the weight of all resins employed, in tons per month and tons per year,
 - d. the VOC content of each resin employed, in percent by weight; and
 - e. the total VOC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)h., in pounds per month and tons per year.
- (5) The FEPTIO application for this emissions unit, P013, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 15.51

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 775

MAGLC (ug/m³): 2028.6

The permittee, has demonstrated that emissions of styrene, from emissions unit P013, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

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

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (9) The permittee shall retain a copy of all records on-site, including calculations and supporting information for at least 5 years.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. an identification of each day during which the average hourly styrene emissions, excluding cleanup materials, from this emissions unit exceeded 0.19 lb/hr, and the actual average hourly OC emissions for each such day;
 - ii. an identification of each month during which any photochemically reactive cleanup materials were employed, and the actual OC and individual HAP emissions for each such month;
 - iii. an identification of each month during which any HAP containing clean-up material was employed, and the actual OC and individual HAP emissions for each such month; and
 - iv. all exceedances of the rolling, 12-month emission limitation for each individual HAP and total of all HAPs.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September),

unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

The permittee shall provide in the required annual permit evaluation report:

- a. an identification of each day during which the OC emissions, excluding cleanup materials, from this emissions unit exceeded 4.56 lbs/day, and the actual OC emissions for each such day;
 - b. an identification of each month during which the combined OC emissions, from cleanup materials from all emissions units located at this facility, exceeded 792 lbs/month facility-wide, and the actual OC emissions from cleanup materials for each such month;
 - c. all exceedances of the annual emission limitation for VOCs;
 - d. all exceedances of the annual for resin usage;
 - e. all exceedances of the limitation for maximum resin VOC content; and
 - f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.
- (3) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

f) Testing Requirements

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

- a. Emission Limitation:

0.19 lb/hr of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

$E_{OCave} = \text{summation of } (W_i \times OC_i \times EF_{OCi} \div H) \text{ for all resins employed}$

where:

E_{OCave} = OC emissions from all resin operations, in pounds per hour;

H = hours per day of operation, as recorded in d)(1)e.;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OCi} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

b. Emission Limitation:

4.56 lbs/day of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E_{OCd} = summation of ($W_i \times OC_i \times EF_{OCi}$) for all resins employed

where:

E_{OCd} = OC emissions as from all resin operations, in pounds per day;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OCi} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

c. Emission Limitation:

0.83 ton/year of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

This limitation was established by multiplying the 4.56 pounds per day emission rate by the maximum operating days of 365 and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

792 lbs/month of OC, from cleanup materials facility-wide

Applicable Compliance Method:

Compliance shall be demonstrated based upon the following equation:

EC_{OCm} = summation of $(V_i \times OC_i)$ for all cleanup materials employed

where:

EC_{OCm} = OC emissions from the cleanup materials, in pounds per month;

V_i = the volume of cleanup material applied, as recorded in d)(2)d., in gallons per month; and

OC_i = the OC content of cleanup material i, as recorded in d)(2)e., in pounds per gallon.

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound content cleanup materials employed.

e. Emission Limitation:

4.75 tons/year of OC, from cleanup materials facility-wide

Applicable Compliance Method:

This limitation was established by multiplying the 792 pounds per month emission rate by a maximum number of twelve months and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

9.9 tons/year as a rolling, 12-month summation of individual HAP for the facility

Applicable Compliance Method:

$E_{HAP} = (W_i \times HAP_i \times EF_{HAP})$

where:

E_{HAP} = emissions of each individual HAP all resin operations, in tons per year;

W_i = the weight of each resin employed, as recorded in d)(3)d., in tons per year;

HAP_i = the individual HAP content of each resin, as recorded in d)(3)b., in percent by weight; and

$EF_{HAP} = 0.04$ (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: The testing and evaluation requirements contained in 40 CFR part 63, subpart SS, and 63.5850 shall be used to determine organic HAP emission factors for any operation.

g. Emission Limitation:

24.9 tons/year as a rolling, 12-month summation of total, combined HAP for the facility

Applicable Compliance Method:

Compliance may be demonstrated as a summation of the individual HAP emissions calculated by f)(1)f.

h. 9.9 tons/year of VOC emissions for all reinforced plastic composites production operations located at this facility, excluding clean-up materials

Applicable Compliance Method:

This limitation was established by multiplying the 672 tons per year of resin utilization by a maximum resin VOC content of 36.81 tons of VOC per 100 tons of resin and multiplying by 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)). Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

Note: VOC content and emissions factors shall be determined in accordance with the methods and procedures of OAC rule 3745-21-25.

g) Miscellaneous Requirements

(1) None.

3. Emissions Unit Group - mixers: P001, P002

EU ID	Operations, Property and/or Equipment Description
P001	Resin Paste Mixer 1
P002	Resin Paste Mixer 2

- a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).
- (1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.
- a. d)(6) through d)(9) and e)(2)f.
- (2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.
- a. None.
- b) Applicable Emissions Limitations and/or Control Requirements
- (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01441, issued 4/20/2006)	Organic compound (OC) emissions, excluding emissions from non-photochemically reactive clean-up materials, shall not exceed 1.62 lbs/hr, 38.88 lbs/day and 7.09 tons/year. See b)(2)a. Total OC emissions from clean-up materials from the entire facility shall not exceed 792 lbs/month and 4.75 tons/year. See c)(1) and c)(2). Particulate emissions (PE) shall not exceed 0.024 lb/hr and 0.1 ton/year. Visible emissions shall not exceed 0%

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		opacity as a 6-minute average.
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-31-05(E)	See b)(2)c. through b)(2)e.
d.	OAC rule 3745-17-07(A)	See b)(2)f.
e.	OAC rule 3745-17-11(B)	See b)(2)f.
f.	OAC rule 3745-21-07(G)(2)	See b)(2)f. and b)(2)g.
g.	OAC rule 3745-21-25(A)(2)(e)	Exemption from the control of VOC emissions. See b)(2)h.
h.	ORC 3704.03(F)(4)(c)	See d)(6) through d)(9).

(2) Additional Terms and Conditions

- a. The OC emissions from the process consists of styrene, a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- b. The combined emissions of hazardous air pollutants (HAP) from all emissions units at this facility shall not exceed 9.9 tons per year of individual HAP and 24.9 tons per year of total HAP, based upon a rolling, 12-month summation of the monthly emissions.
- c. The emissions of volatile organic compounds (VOC) for all reinforced plastic composites production operations located at this facility, excluding emissions from clean-up materials, shall not exceed 9.9 tons per year.
- d. The maximum resin usage for all reinforced plastic composites production operations located at this facility, combined, shall not exceed 672 tons per year.
- e. The maximum VOC content for all resins utilized in reinforced plastic composites production operations shall not exceed 36.81 percent by weight.
- f. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)f., b)(2)a., b)(2)g., c)(1), d)(2)b., and e)(1)a.ii.
- h. This emissions unit is exempt from the requirements of OAC rule 3745-21-25 except for the recordkeeping requirements specified under OAC rule 3745-21-

25(E) for the procedure to determine VOC emissions factors and monomer content of resins and gel coats.

c) Operational Restrictions

- (1) The permittee shall use only non-photochemically reactive material (e.g., acetone) for cleanup of this emissions unit.
- (2) The permittee shall use only non-hazardous air pollutant material for cleanup of this emissions unit.
- (3) The permittee shall operate the particulate control, fabric filter system whenever this emissions unit is in operation.

d) 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 employed;
 - b. the weight of each resin employed, in pounds;
 - c. the OC content of each resin employed, in percent by weight;
 - d. the total OC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)b., in pounds per day;
 - e. the actual number of hours that the emissions unit was in operation; and
 - f. the average, hourly OC emission rate for all resins employed (e.g., styrene), calculated in compliance with the procedure in f)(1)a., in pounds per hour.

The daily and hourly (average) OC emissions rates shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (2) The permittee shall collect and record the following information for each month (total facility-wide):
 - a. the company identification for each cleanup material employed;
 - b. an identification of whether or not each cleanup material employed is photochemically reactive;
 - c. an identification of whether or not each clean-up material employed contains a HAP;
 - d. the volume of each cleanup material applied, in gallons;
 - e. the OC content of each cleanup material applied, in pounds per gallon;

- f. the total OC emission rate for each cleanup material, calculated in compliance with the procedure in f)(1)d., in pounds per month; and
- g. the combined total OC emission rate from all cleanup materials employed at this facility, in pounds per month (= usage, all is assumed to evaporate).

The monthly OC emission rate shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (3) The permittee shall collect and record the following information each month for the entire facility:

- a. the name and identification number of each resin employed;
- b. the individual HAP content for each HAP of each resin, in weight percent, of individual HAP;
- c. the total combined HAP content of each resin, in weight percent of combined HAPs (sum all the individual HAP contents from b.);
- d. the number of tons of each resin employed, in tons per month and tons per rolling, 12-month period;
- e. the total individual HAP emissions from all resins employed, calculated in compliance with the procedure in f)(1)i., in tons per rolling, 12-month period; and
- f. the total combined HAP emissions from all resins, in tons per rolling, 12-month period; calculated in compliance with the procedure in f)(1)j.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Toledo Division of Environmental Services. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

- (4) The permittee shall collect and record the following information for each month for this emissions unit:

- a. the company identification for each resin employed;
- b. the weight of each resin employed, in pounds;
- c. the weight of all resins employed, in tons per month and tons per year,
- d. the VOC content of each resin employed, in percent by weight; and
- e. the total VOC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)k., in pounds per month and tons per year.

- (5) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be

noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
- b. the total duration of any visible emission incident; and
- c. any corrective actions taken to eliminate the visible emissions.

(6) The FEPTIO application for these emissions units, P001, P002, were evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 15.51

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 775

MAGLC (ug/m³): 2028.6

The permittee, has demonstrated that emissions of styrene, from emissions units P001, P002, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the “Toxic Air Contaminant Statute”, ORC 3704.03(F).

- (7) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration”, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

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

- (8) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (9) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (10) The permittee shall collect and record on a daily basis whether or not the particulate control, fabric filter system, was in service when the emissions unit was in operation.
- (11) The permittee shall retain a copy of all records on-site, including calculations and supporting information for at least 5 years.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. an identification of each day during which the average hourly styrene emissions, excluding cleanup materials, from this emissions unit exceeded 1.62 lbs/hr, and the actual average hourly OC emissions for each such day;

- ii. an identification of each month during which any photochemically reactive cleanup materials were employed, and the actual OC and individual HAP emissions for each such month;
 - iii. an identification of each month during which any HAP containing clean-up material was employed, and the actual OC and individual HAP emissions for each such month; and
 - iv. all exceedances of the rolling, 12-month emission limitation for each individual HAP and total of all HAPs.
- b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

The permittee shall provide in the required annual permit evaluation report:

- a. an identification of each day during which the OC emissions, excluding cleanup materials, from this emissions unit exceeded 38.88 lbs/day, and the actual OC emissions for each such day;
- b. an identification of each month during which the combined OC emissions, from cleanup materials from all emissions units located at this facility, exceeded 792 lbs/month facility-wide, and the actual OC emissions from cleanup materials for each such month;
- c. all exceedances of the annual emission limitation for VOCs;
- d. all exceedances of the annual limitation for resin usage; and
- e. all exceedances of the limitation for maximum resin VOC content.

- f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.
- (3) The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record showing that the particulate control, fabric filter system 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 Toledo Division of Environmental Services within 30 days after the event occurs.
- (4) The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Toledo Division of Environmental Services by January 31 and July 31 of each year and shall cover the previous 6-month period.
- (5) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.
- f) **Testing Requirements**
- (1) Compliance with the allowable emission limitations in b) of these terms and conditions shall be determined in accordance with the following methods:
- a. **Emission Limitation:**
- 1.62 lbs/hr of OC, excluding emissions from cleanup materials
- Applicable Compliance Method:**
- Compliance shall be determined based upon the following equation:
- $$E_{OC_{ave}} = \text{summation of } (W_i \times OC_i \times EF_{OC_i} \div H) \text{ for all resins employed}$$
- where:
- $E_{OC_{ave}}$ = OC emissions from all resin operations, in pounds per hour;
- H = hours per day of operation, as recorded in d)(1)e.;
- W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;
- OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and
- EF_{OC_i} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

b. Emission Limitation:

38.88 lbs/day of OC, excluding emissions from cleanup materials.

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E_{OCd} = summation of $(W_i \times OC_i \times EF_{OCi})$ for all resins employed

where:

E_{OCd} = OC emissions as from all resin operations, in pounds per day;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OCi} = 0.01 (worst case emission factor) for OC emissions from mixing acrylic varnish (AP-42 Chapter 6.4, Table 6.4-1 (1/95)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

c. Emission Limitation:

7.09 tons/year of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

This limitation was established by multiplying the 38.88 pounds per day emission rate by the maximum operating days of 365 and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

792 lbs/month of OC, from cleanup materials facility-wide

Applicable Compliance Method:

Compliance shall be demonstrated based upon the following equation:

EC_{OCm} = summation of $(V_i \times OC_i)$ for all cleanup materials employed

where:

EC_{OCm} = OC emissions from the cleanup materials, in pounds per month;

V_i = the volume of cleanup material applied, as recorded in d)(2)d., in gallons per month; and

OC_i = the OC content of cleanup material i, as recorded in d)(2)e., in pounds per gallon.

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound content cleanup materials employed.

e. Emission Limitation:

4.75 tons/year of OC, from cleanup materials facility-wide

This limitation was established by multiplying the 792 pounds per month emission rate by a maximum number of twelve months and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

0.024 lb/hr of PE

Applicable Compliance Method:

Compliance shall be based upon the following equation:

$$E(PE) = P \times CONCSolid \times EF(PE) \times (1-CE)$$

where:

$E(PE)$ = particulate emissions, in lb/hr;

P = maximum mix production rate, which is 440 lbs/hr as noted in the permit application;

$CONCSolid$ = maximum solids concentration in the mix, which is 237.34 lbs fillers/440 lb batch as noted in the permit application;

$EF(PE)$ = Emission factor of 0.01 as noted in AP-42 Chapter 6.4, Reference 4 to Table 6.4-1 (1/95); and

CE = efficiency of PE control device is 99.0%, or 0.99, as specified in the permit application.

If required, the permittee shall demonstrate compliance using the procedures specified in Method 5 of 40 CFR Part 60, Appendix A.

g. Emission Limitation:

0.1 ton/year of PE

Applicable Compliance Method:

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.024 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

h. Emission Limitation:

VE shall not exceed 0% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emission observations performed in accordance with the procedures specified in 40 CFR Part 60, Appendix A, Method 9.

i. Emission Limitation:

9.9 tons/year as a rolling, 12-month summation of individual HAP for the facility

Applicable Compliance Method:

$$E_{\text{HAP}} = (W_i \times \text{HAP}_i \times EF_{\text{HAP}})$$

where:

E_{HAP} = emissions of each individual HAP all resin operations, in tons per year;

W_i = the weight of each resin employed, as recorded in d)(3)d., in tons per year;

HAP_i = the individual HAP content of each resin, as recorded in d)(3)b., in percent by weight; and

EF_{HAP} = 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: The testing and evaluation requirements contained in 40 CFR part 63, subpart SS, and 63.5850 shall be used to determine organic HAP emission factors for any operation.

j. Emission Limitation:

24.9 tons/year as a rolling, 12-month summation of total, combined HAP for the facility

Applicable Compliance Method:

Compliance may be demonstrated as a summation of the individual HAP emissions calculated by f)(1)i.

k. Emission Limitation:

9.9 tons/year of VOC emissions for all reinforced plastic composites production operations located at this facility, excluding clean-up materials

Applicable Compliance Method:

This limitation was established by multiplying the 672 tons per year of resin utilization by a maximum resin VOC content of 36.81 tons of VOC per 100 tons of resin and multiplying by 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)). Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

Note: VOC content and emissions factors shall be determined in accordance with the methods and procedures of OAC rule 3745-21-25.

g) Miscellaneous Requirements

(1) None.

4. Emissions Unit Group - pultrusion group 2: P005, P006, P007

EU ID	Operations, Property and/or Equipment Description
P005	Pultrusion Line 1-3 Fiberglass Resin Composite Antennas
P006	Pultrusion Line 1-4 Fiberglass Resin Composite Antennas
P007	Pultrusion Line 1-5 Fiberglass Resin composite Antennas

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

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

a. d)(5) through d)(8) and e)(2)f.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01441, issued 4/20/2006)	Organic compound (OC) emissions, excluding emissions from non-photochemically reactive clean-up materials, shall not exceed 0.73 lb/hr, 17.44 lbs/day and 3.18 tons/year. See b)(2)a. Total OC emissions from clean-up materials from the entire facility shall not exceed 792 lbs/month and 4.75 tons/year. See c)(1).
b.	OAC rule 3745-31-05(D)	See b)(2)b.
c.	OAC rule 3745-31-05(E)	See b)(2)c. through b)(2)e.
d.	OAC rule 3745-21-07(G)(2)	See b)(2)f. and b)(2)g.
e.	OAC rule 3745-21-25(A)(2)(e)	Exemption from the control of VOC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		emissions. See b)(2)h.
f.	ORC 3704.03(F)(4)(c)	See d)(5) through d)(8).

(2) Additional Terms and Conditions

- a. The OC emissions from the process consists of styrene, a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- b. The combined emissions of hazardous air pollutants (HAP) from all emissions units at this facility shall not exceed 9.9 tons per year of individual HAP and 24.9 tons per year of total HAP, based upon a rolling, 12-month summation of the monthly emissions.
- c. The emissions of volatile organic compounds (VOC) for all reinforced plastic composites production operations located at this facility, excluding emissions from clean-up materials, shall not exceed 9.9 tons per year, as a rolling, 12-month summation.
- d. The maximum resin usage for all reinforced plastic composites production operations located at this facility, combined, shall not exceed 672 tons per rolling, 12-month period.
- e. The maximum VOC content for all resins utilized in reinforced plastic composites production operations shall not exceed 36.81 percent by weight.
- f. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)d., b)(2)a., b)(2)g., c)(1), d)(2)b., and e)(1)a.ii.
- h. This emissions unit is exempt from the requirements of OAC rule 3745-21-25 except for the recordkeeping requirements specified under OAC rule 3745-21-25(E) for the procedure to determine VOC emissions factors and monomer content of resins and gel coats.

c) Operational Restrictions

- (1) The permittee shall use only non-photochemically reactive material (e.g., acetone) for cleanup of this emissions unit.
- (2) The permittee shall use only non-hazardous air pollutant material for cleanup of this emissions unit.

d) 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 employed;
 - b. the weight of each resin employed, in pounds;
 - c. the OC content of each resin employed, in percent by weight;
 - d. the total OC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)b., in pounds per day;
 - e. the actual number of hours that the emissions unit was in operation; and
 - f. the average, hourly OC emission rate for all resins employed (e.g., styrene), calculated in compliance with the procedure in f)(1)a., in pounds per hour.

The daily and hourly (average) OC emissions rates shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (2) The permittee shall collect and record the following information for each month (total facility-wide):
 - a. the company identification for each cleanup material employed;
 - b. an identification of whether or not each cleanup material employed is photochemically reactive;
 - c. an identification of whether or not each clean-up material employed contains a HAP;
 - d. the volume of each cleanup material applied, in gallons;
 - e. the OC content of each cleanup material applied, in pounds per gallon;
 - f. the total OC emission rate for each cleanup material, calculated in compliance with the procedure in f)(1)d., in pounds per month; and
 - g. the combined total OC emission rate from all cleanup materials employed at this facility, in pounds per month (= usage, all is assumed to evaporate).

The monthly OC emission rate shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (3) The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each resin employed;
 - b. the individual HAP content for each HAP of each resin, in weight percent, of individual HAP;
 - c. the total combined HAP content of each resin, in weight percent of combined HAPs (sum all the individual HAP contents from b.);
 - d. the number of tons of each resin employed, in tons per month and tons per rolling, 12-month period;
 - e. the total individual HAP emissions from all resins employed, calculated in compliance with the procedure in f)(1)f., in tons per rolling, 12-month period; and
 - f. the total combined HAP emissions from all resins, in tons per rolling, 12-month period; calculated in compliance with the procedure in f)(1)g.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Toledo Division of Environmental Services. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

- (4) The permittee shall collect and record the following information for each month for this emissions unit:
- a. the company identification for each resin employed;
 - b. the weight of each resin employed, in pounds;
 - c. the weight of all resins employed, in tons per month and tons per year,
 - d. the VOC content of each resin employed, in percent by weight; and
 - e. the total VOC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)h., in pounds per month and tons per year.
- (5) The FEPTIO application for these emissions units, P005, P006, P007, were evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio

EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 15.51

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 775

MAGLC (ug/m³): 2028.6

The permittee, has demonstrated that emissions of styrene, from emissions units P005, P006, P007, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

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

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
 - (9) The permittee shall retain a copy of all records on-site, including calculations and supporting information for at least 5 years.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
 - a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. an identification of each day during which the average hourly styrene emissions, excluding cleanup materials, from this emissions unit exceeded 0.73 lb/hr, and the actual average hourly OC emissions for each such day;
 - ii. an identification of each month during which any photochemically reactive cleanup materials were employed, and the actual OC and individual HAP emissions for each such month;
 - iii. an identification of each month during which any HAP containing clean-up material was employed, and the actual OC and individual HAP emissions for each such month;
 - iv. all exceedances of the rolling, 12-month emission limitation for each individual HAP and total of all HAPs;
 - v.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

The permittee shall provide in the required annual permit evaluation report:

- a. an identification of each day during which the OC emissions, excluding cleanup materials, from this emissions unit exceeded 17.44 lbs/day, and the actual OC emissions for each such day;
- b. an identification of each month during which the combined OC emissions, from cleanup materials from all emissions units located at this facility, exceeded 792 lbs/month facility-wide, and the actual OC emissions from cleanup materials for each such month;
- c. all exceedances of the rolling, 12-month emission limitation for VOCs;
- d. all exceedances of the rolling, 12-month limitation for resin usage;
- e. all exceedances of the limitation for maximum resin VOC content; and
- f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.

- (3) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

f) Testing Requirements

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

- a. Emission Limitation:

0.73 lb/hr of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

$E_{OC_{ave}}$ = summation of $(W_i \times OC_i \times EF_{OC_i} \div H)$ for all resins employed

where:

$E_{OC_{ave}}$ = OC emissions from all resin operations, in pounds per hour;

H = hours per day of operation, as recorded in d)(1)e.;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OC_i} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

b. Emission Limitation:

17.44 lbs/day of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E_{OCd} = summation of $(W_i \times OC_i \times EF_{OC_i})$ for all resins employed

where:

E_{OCd} = OC emissions as from all resin operations, in pounds per day;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OC_i} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

c. Emission Limitation:

3.18 tons/year of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

This limitation was established by multiplying the 17.44 pounds per day emission rate by the maximum operating days of 365 and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

792 lbs/month of OC, from cleanup materials facility-wide

Applicable Compliance Method:

Compliance shall be demonstrated based upon the following equation:

EC_{OCm} = summation of $(V_i \times OC_i)$ for all cleanup materials employed

where:

EC_{OCm} = OC emissions from the cleanup materials, in pounds per month;

V_i = the volume of cleanup material applied, as recorded in d)(2)d., in gallons per month; and

OC_i = the OC content of cleanup material i, as recorded in d)(2)e., in pounds per gallon.

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound content cleanup materials employed.

e. Emission Limitation:

4.75 tons/year of OC, from cleanup materials facility-wide

Applicable Compliance Method:

This limitation was established by multiplying the 792 pounds per month emission rate by a maximum number of twelve months and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

9.9 tons/year as a rolling, 12-month summation of individual HAP for the facility

Applicable Compliance Method:

$E_{HAP} = (W_i \times HAP_i \times EF_{HAP})$

where:

E_{HAP} = emissions of each individual HAP all resin operations, in tons per year;

W_i = the weight of each resin employed, as recorded in d)(3)d., in tons per year;

HAP_i = the individual HAP content of each resin, as recorded in d)(3)b., in percent by weight; and

$EF_{HAP} = 0.04$ (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: The testing and evaluation requirements contained in 40 CFR part 63, subpart SS, and 63.5850 shall be used to determine organic HAP emission factors for any operation.

g. Emission Limitation:

24.9 tons/year as a rolling, 12-month summation of total, combined HAP for the facility

Applicable Compliance Method:

Compliance may be demonstrated as a summation of the individual HAP emissions calculated by f)(1)f.

h. Emission Limitation:

9.9 tons/year of VOC emissions for all reinforced plastic composites production operations located at this facility, excluding clean-up materials

Applicable Compliance Method:

This limitation was established by multiplying the 672 tons per year of resin utilization by a maximum resin VOC content of 36.81 tons of VOC per 100 tons of resin and multiplying by 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)). Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

Note: VOC content and emissions factors shall be determined in accordance with the methods and procedures of OAC rule 3745-21-25.

g) Miscellaneous Requirements

(1) None.

5. Emissions Unit Group - pultrusion_group 1: P003, P008, P009, P010, P011, P012

EU ID	Operations, Property and/or Equipment Description
P003	Pultrusion Line 1-1 Fiberglass Resin Composite CB antennas
P008	Pultrusion Line 1-N Fiberglass Resin Composite CB Antennas
P009	Pultrusion Line 2-1 Fiberglass Resin Composite Pultrusion Line
P010	Pultrusion Line 2-2 Fiberglass Resin Composite CB Antennas
P011	Pultrusion Line 2-3 Fiberglass Resin Composite CB Antennas
P012	Pultrusion Line 2-4 Fiberglass Resin Composite CB Antennas

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

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

a. d)(5) through d)(8) and e)(2)f.

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

a. None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3) (PTI 04-01441, issued 4/20/2006)	Organic compound (OC) emissions, excluding emissions from non-photochemically reactive clean-up materials, shall not exceed 1.59 lbs/hr, 38.14 lbs/day and 6.96 tons/year. See b)(2)a. Total OC emissions from clean-up materials from the entire facility shall not exceed 792 lbs/month and 4.75 tons/year. See c)(1) and c)(2).
b.	OAC rule 3745-31-05(D)	See b)(2)b.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(E)	See b)(2)c. through b)(2)e.
d.	OAC rule 3745-21-07(G)(2)	See b)(2)f. and b)(2)g.
e.	OAC rule 3745-21-25(A)(2)(e)	Exemption from the control of VOC emissions. See b)(2)h.
f.	ORC 3704.03(F)(4)(c)	See d)(5) through d)(8).

(2) Additional Terms and Conditions

- a. The OC emissions from the process consists of styrene, a photochemically reactive material, as defined in OAC rule 3745-21-01(C)(5).
- b. The combined emissions of hazardous air pollutants (HAP) from all emissions units at this facility shall not exceed 9.9 tons per year of individual HAP and 24.9 tons per year of total HAP, based upon a rolling, 12-month summation of the monthly emissions.
- c. The emissions of volatile organic compounds (VOC) for all reinforced plastic composites production operations located at this facility, excluding emissions from clean-up materials, shall not exceed 9.9 tons per year, as a rolling, 12-month summation.
- d. The maximum resin usage for all reinforced plastic composites production operations located at this facility, combined, shall not exceed 672 tons per rolling, 12-month period.
- e. The maximum VOC content for all resins utilized in reinforced plastic composites production operations shall not exceed 36.81 percent by weight.
- f. The emission limitation required by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- g. On February 18, 2008, OAC rule 3745-21-07 was revised in its entirety; therefore, the 21-07 rule that was in effect prior to this date is no longer part of the State regulations. On April 4, 2008, the rule revision was submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP); however, until the U.S. EPA approves the revision to OAC rule 3745-21-07, the requirement to comply with the previous 21-07 rule provisions still exists as part of the federally-approved SIP for Ohio. The following terms and conditions shall become void after U.S. EPA approves the rule revision:

b)(1)d., b)(2)a., b)(2)g., c)(1), d)(2)b., and e)(1)a.ii.
- h. This emissions unit is exempt from the requirements of OAC rule 3745-21-25 except for the recordkeeping requirements specified under OAC rule 3745-21-25(E) for the procedure to determine VOC emissions factors and monomer content of resins and gel coats.

c) Operational Restrictions

- (1) The permittee shall use only non-photochemically reactive material (e.g., acetone) for cleanup of this emissions unit.
- (2) The permittee shall use only non-hazardous air pollutant material for cleanup of this emissions unit.

d) 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 employed;
 - b. the weight of each resin employed, in pounds;
 - c. the OC content of each resin employed, in percent by weight;
 - d. the total OC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)b., in pounds per day;
 - e. the actual number of hours that the emissions unit was in operation; and
 - f. the average, hourly OC emission rate for all resins employed (e.g., styrene), calculated in compliance with the procedure in f)(1)a., in pounds per hour.

The daily and hourly (average) OC emissions rates shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (2) The permittee shall collect and record the following information for each month (total facility-wide):
 - a. the company identification for each cleanup material employed;
 - b. an identification of whether or not each cleanup material employed is photochemically reactive;
 - c. an identification of whether or not each clean-up material employed contains a HAP;
 - d. the volume of each cleanup material applied, in gallons;
 - e. the OC content of each cleanup material applied, in pounds per gallon;
 - f. the total OC emission rate for each cleanup material, calculated in compliance with the procedure in f)(1)d., in pounds per month; and
 - g. the combined total OC emission rate from all cleanup materials employed at this facility, in pounds per month (= usage, all is assumed to evaporate).

The monthly OC emission rate shall be calculated by no later than the first week of the following month from which information was collected for this emissions unit.

- (3) The permittee shall collect and record the following information each month for the entire facility:
- a. the name and identification number of each resin employed;
 - b. the individual HAP content for each HAP of each resin, in weight percent, of individual HAP;
 - c. the total combined HAP content of each resin, in weight percent of combined HAPs (sum all the individual HAP contents from b.);
 - d. the number of tons of each resin employed, in tons per month and tons per rolling, 12-month period;
 - e. the total individual HAP emissions from all resins employed, calculated in compliance with the procedure in f)(1)f., in tons per rolling, 12-month period; and
 - f. the total combined HAP emissions from all resins, in tons per rolling, 12-month period; calculated in compliance with the procedure in f)(1)g.

A listing of the HAPs can be found in Section 112(b) of the Clean Air Act or can be obtained by contacting the Toledo Division of Environmental Services. Material Safety Data Sheets typically include a listing of the solvents contained in the coatings or cleanup materials.

- (4) The permittee shall collect and record the following information for each month for this emissions unit:
- a. the company identification for each resin employed;
 - b. the weight of each resin employed, in pounds;
 - c. the weight of all resins employed, in tons per month and tons per year,
 - d. the VOC content of each resin employed, in percent by weight; and
 - e. the total VOC emission rate for all resins employed, calculated in compliance with the procedure in f)(1)h., in pounds per month and tons per year.
- (5) The FEPTIO application for these emissions units, P003, P008, P009, P010, P011, P012, were evaluated based on the actual materials and the design parameters of the emissions unit's(s) exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC),

calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

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

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

Toxic Contaminant: Styrene

TLV (mg/m³): 85

Maximum Hourly Emission Rate (lbs/hr): 15.51

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 775

MAGLC (ug/m³): 2028.6

The permittee, has demonstrated that emissions of styrene, from emissions units P003, P008, P009, P010, P011, P012, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

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

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

- (7) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (8) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- (9) The permittee shall retain a copy of all records on-site, including calculations and supporting information for at least 5 years.
- e) Reporting Requirements
- (1) The permittee shall submit quarterly deviation (excursion) reports that identify:
- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. an identification of each day during which the average hourly styrene emissions, excluding cleanup materials, from this emissions unit exceeded 1.59 lbs/hr, and the actual average hourly OC emissions for each such day;
 - ii. an identification of each month during which any photochemically reactive cleanup materials were employed, and the actual OC and individual HAP emissions for each such month;
 - iii. an identification of each month during which any HAP containing clean-up material was employed, and the actual OC and individual HAP emissions for each such month; and
 - iv. all exceedances of the rolling, 12-month emission limitation for each individual HAP and total of all HAPs.
 - b. the probable cause of each deviation (excursion);
 - c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
 - d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted, electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September),

unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

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

The permittee shall provide in the required annual permit evaluation report:

- a. an identification of each day during which the OC emissions, excluding cleanup materials, from this emissions unit exceeded 38.14 lbs/day, and the actual OC emissions for each such day;
 - b. an identification of each month during which the combined OC emissions, from cleanup materials from all emissions units located at this facility, exceeded 792 lbs/month facility-wide, and the actual OC emissions from cleanup materials for each such month;
 - c. all exceedances of the annual emission limitation for VOCs;
 - d. all exceedances of the annual limitation for resin usage;
 - e. all exceedances of the limitation for maximum resin VOC content; and
 - f. any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration; or if no changes to the emissions, emissions unit(s), or the exhaust stack have been made, a statement to this effect.
- (3) The reports contained in this permit shall be submitted in accordance with the reporting requirements specified in Part 1 - General Terms and Conditions, Section A of this permit.

f) Testing Requirements

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

- a. Emission Limitation:

1.59 lbs/hr of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

$E_{OCave} = \text{summation of } (W_i \times OC_i \times EF_{OCi} \div H) \text{ for all resins employed}$

where:

$E_{OC_{ave}}$ = OC emissions from all resin operations, in pounds per hour;

H = hours per day of operation, as recorded in d)(1)e.;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OC_i} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

b. Emission Limitation:

38.14 lbs/day of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

Compliance shall be determined based upon the following equation:

E_{OCd} = summation of ($W_i \times OC_i \times EF_{OC_i}$) for all resins employed

where:

E_{OCd} = OC emissions as from all resin operations, in pounds per day;

W_i = the weight of resin i employed, as recorded in d)(1)b., in pounds per day;

OC_i = the OC content of resin i, as recorded in d)(1)c., in percent by weight; and

EF_{OC_i} = 0.04 (worst case emission factor) for OC emissions (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound contents of the resin.

c. Emission Limitation:

6.96 tons/year of OC, excluding emissions from cleanup materials

Applicable Compliance Method:

This limitation was established by multiplying the 38.14 pounds per day emission rate by the maximum operating days of 365 and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

792 lbs/month of OC, from cleanup materials facility-wide

Applicable Compliance Method:

Compliance shall be demonstrated based upon the following equation:

EC_{OCm} = summation of $(V_i \times OC_i)$ for all cleanup materials employed

where:

EC_{OCm} = OC emissions from the cleanup materials, in pounds per month;

V_i = the volume of cleanup material applied, as recorded in d)(2)d., in gallons per month; and

OC_i = the OC content of cleanup material i, as recorded in d)(2)e., in pounds per gallon.

Note: Formulation data or Method 24 of 40 CFR Part 60, Appendix A shall be used to determine the organic compound content cleanup materials employed.

e. Emission Limitation:

4.75 tons/year of OC, from cleanup materials facility-wide

Applicable Compliance Method:

This limitation was established by multiplying the 792 pounds per month emission rate by a maximum number of twelve months and dividing by 2,000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

9.9 tons/year as a rolling, 12-month summation of individual HAP for the facility

Applicable Compliance Method:

$E_{HAP} = (W_i \times HAP_i \times EF_{HAP})$

where:

E_{HAP} = emissions of each individual HAP all resin operations, in tons per year;

W_i = the weight of each resin employed, as recorded in d)(3)d., in tons per year;

HAP_i = the individual HAP content of each resin, as recorded in d)(3)b., in percent by weight; and

$EF_{HAP} = 0.04$ (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)).

Note: The testing and evaluation requirements contained in 40 CFR part 63, subpart SS, and 63.5850 shall be used to determine organic HAP emission factors for any operation.

g. Emission Limitation:

24.9 tons/year as a rolling, 12-month summation of total, combined HAP for the facility

Applicable Compliance Method:

Compliance may be demonstrated as a summation of the individual HAP emissions calculated by f)(1)f.

h. Emission Limitation:

9.9 tons/year of VOC emissions for all reinforced plastic composites production operations located at this facility, excluding clean-up materials

Applicable Compliance Method:

This limitation was established by multiplying the 672 tons per year of resin utilization by a maximum resin VOC content of 36.81 tons of VOC per 100 tons of resin and multiplying by 0.04 (worst case emission factor) for HAP emissions (styrene), (AP-42 Chapter 4.12, Table 4.12-2 (9/88)). Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

Note: VOC content and emissions factors shall be determined in accordance with the methods and procedures of OAC rule 3745-21-25.

g) Miscellaneous Requirements

(1) None.