



State of Ohio Environmental Protection Agency

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

**CERTIFIED MAIL**

Street Address:

122 S. Front Street

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

Mailing Address:

Lazarus Gov. Center  
P.O. Box 1049

**Application No: 13-04003**

**DATE:** 1/23/2003

Dal-Little Fabricating, Incorporated  
Joe Masielle  
11707 Putnam Avenue  
Cleveland, OH 44105

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

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

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

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

Very truly yours,

Michael W. Ahern, Supervisor  
Field Operations and Permit Section  
Division of Air Pollution Control

cc: USEPA

CBAPC



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**Permit To Install  
Terms and Conditions**

**Issue Date: 1/23/2003  
Effective Date: 1/23/2003**

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**FINAL PERMIT TO INSTALL 13-04003**

Application Number: 13-04003  
APS Premise Number: 1318008351  
Permit Fee: **\$800**  
Name of Facility: Dal-Little Fabricating, Incorporated  
Person to Contact: Joe Masielle  
Address: 11707 Putnam Avenue  
Cleveland, OH 44105

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**11707 Putnam Avenue  
Cleveland, Ohio**

Description of proposed emissions unit(s):  
**Molding and spraying of fiberglass -- P001 and P002.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

## Part I - GENERAL TERMS AND CONDITIONS

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

#### 1. Compliance Requirements

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

#### 2. Reporting Requirements Related to Monitoring and Record keeping Requirements

The permittee shall submit required reports in the following manner:

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

#### 3. Records Retention Requirements

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

#### 4. Inspections and Information Requests

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

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

**5. Scheduled Maintenance/Malfunction Reporting**

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

**6. Permit Transfers**

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

**7. Air Pollution Nuisance**

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

**8. Termination of Permit to Install**

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

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

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

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

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

**10. Public Disclosure**

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

**11. Applicability**

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

**12. Best Available Technology**

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

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

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**Dal-Little Fabricating, Incorporated**  
**PTI Application: 13-04003**  
**Issued: 1/23/2003**

**Facility ID: 1318008351**

**14. Construction Compliance Certification**

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

**15. Fees**

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

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

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

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

Dal-Little Fabricating, Incorporated  
PTI Application: 13-04003  
Issued: 1/23/2003

Facility ID: 1318008351

<u>Pollutant</u>	<u>Tons Per Year</u>
* OC from gel coats and resins	11.2
OC from non- photochemically reactive cleanup materials	3.4

\* The OC from gel coats and resins consists of 1.3 tpy MMA and 9.9 tpy styrene as a rolling 365-day period.

**PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - Spray lay-up molding of polyester resin mixes and gel coat mixes to make fiberglass reinforced parts, booth.	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions shall not exceed 6.25 tons/year (TPY), excluding cleanup emissions.  Organic compound (OC) emissions from nonphotochemically reactive cleanup materials shall not exceed 1.7 TPY.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2) and OAC rule 3745-35-07 (B).  See Sections A.2.a and A.2.b below.
	OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8 lbs/hr and 40 lbs/day.
	OAC rule 3745-35-07 (B) Synthetic Minor to avoid Title V status.	Styrene emissions shall not exceed 4.95 tons per rolling 365-day period and Methyl Methacrylate emissions

shall not exceed 1.3 tons per rolling  
365-day period.

See A.2.c below.

## **2. Additional Terms and Conditions**

- 2.a** The emissions of organic material from the resin spray gun operation consist of styrene, a photochemically reactive material and a hazardous air pollutant (HAP).
- 2.b** Acetone and Methylene chloride, non-photochemically reactive materials, shall be the only materials used for cleanup operations.
- 2.c** This restriction limits annual OC emissions to 6.25 tons per rolling, 365-day period, excluding cleanup.

## **B. Operational Restrictions**

- 1.** The maximum annual styrene usage for this emissions unit shall not exceed 4.95 tons per year, based on a rolling, 365-day summation of the styrene usage figures. The maximum annual methyl methacrylate usage for this emissions unit shall not exceed 1.3 tons per year, based on a rolling, 365-day summation of the methyl methacrylate usage figures. The permittee shall comply with this restriction upon startup, based upon operating records from the previous 365-day period.

## **C. Monitoring and/or Record keeping Requirements**

- 1.** The permittee shall collect and record the following information for each day for this emissions unit:
  - a. The company identification for each lay-up material (resin and gel coat) employed;
  - b. The amount, in pounds, of each lay-up material (resin and gel coat) employed;
  - c. The styrene content of each lay-up material (resin and gel coat ), in percent by weight;
  - d. The methyl methacrylate content of each gel coat, in percent by weight;
  - e. The actual number of hours the emissions unit was in operation;
  - f. The total styrene emission rate for all lay-up materials (resin and gel coat) employed

- determined in accordance with Section E.1.a.i of these terms and conditions, in pounds per day;
- g. The total methyl methacrylate emission rate for all the gel coats employed determined in accordance with section E.1.a.ii, in pounds per day;
  - h. The total daily OC emissions (sum of C.1.f and C.1.g);
  - i. The average hourly OC emission rate for all lay-up materials (resins and gel coat) employed determined in accordance with Section E.1.b of these terms and conditions, in pounds per hour;
  - j. The total rolling, 365-day summation of styrene material usage, in pounds per year and tons per year; and
  - k. The total rolling, 365-day summation of methyl methacrylate material usage, in pounds per year and tons per year.
2. The permittee shall collect and record the following information for each year for the purpose of determining annual OC emissions:
- a. The volume of each nonphotochemically reactive cleanup material employed, in gallons per year;
  - b. The OC content of each nonphotochemically reactive cleanup material, in pounds per gallon and;
  - c. The total OC emission rate for all nonphotochemically reactive cleanup materials, in pounds.
3. The permit to install for this emissions unit (P001) was evaluated based on the actual materials (resins) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant potentially emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), which has been adjusted for a 6 day and 12 hour per day work week. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Styrene

TLV (ug/m<sup>3</sup>): 85,202

Maximum Hourly Emission Rate (lbs/hr): 8 (assuming worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 307.5

MAGLC (ug/m<sup>3</sup>): 2,028.63

Pollutant: Methyl methacrylate

TLV (ug/m<sup>3</sup>): 204,764

Maximum Hourly Emission Rate (lbs/hr): 8 (assuming worst case)

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 248.8

MAGLC (ug/m<sup>3</sup>): 4,875.35

Pollutant: Acetone

TLV (ug/m<sup>3</sup>): 1,187,117

Maximum Hourly Emission Rate (lbs/hr): 0.66

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m<sup>3</sup>): 10.27

MAGLC (ug/m<sup>3</sup>): 28,265

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

- a. Changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition

(other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. An identification of each day during which the average hourly OC emissions from lay-up materials (resins and gel coats) exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day; and
  - b. An identification of each day during which the OC emissions from lay-up materials (resins and gel coats) exceeded 40 pounds per day, and the actual OC emissions for each such day.
2. The permittee shall submit deviation reports which identify all exceedances of the rolling, 365-day styrene and Methyl methacrylate emission and usage limitations, as outlined in Condition A.1. and B.1.
3. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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

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

a. Emission Limitation:

Organic compound (OC) emissions shall not exceed 40 lbs/day.

Applicable Compliance Method:

- i. To calculate emissions from spray gun (lay-up) operations, the permittee shall employ the following formula:

$$E(\text{lay-up}) = \text{summation of } (W_i \times E_{Fi})$$

Where

$E(\text{lay-up})$  = the daily organic compound emissions from all lay-up materials (resins and gel coats), in pounds per day;

$i$  = subscript denoting a specific lay-up material (resin and gel coats) employed;

$W_i$  = the weight of lay-up material (resin and gel coats) "i" employed, in tons per day (pounds per day divided by 2000 pounds per ton); and

$E_{Fi}$  = the emission factor for styrene emissions\*, in pounds per ton, from lay-up material (resins and gel coats); where, " $E_{Fi}$ " = 229 lbs styrene/ton resin at 47% styrene content and 305 lbs styrene/ton gel coat at 32% styrene content.

\* This emission factor is based on the styrene content of the resin and the mechanical application type (mechanical atomized), determined as calculated in Table 3, titled "Unified Emission Factor (UEF) for Open Molding of Composites", updated July 23, 2001, and from "Technical Discussion of the Unified Emission Factors for Open Molding of Composites", 4/7/99, by Robert A. Haberlein, Ph.D, QEP. This source of emission factors may be revised in the future and is under review by the USEPA's Emission Factors and Inventory Group, to possibly replace existing AP-42 factors for styrene emissions from resin/gel coat applications.

- ii. To calculate methyl methacrylate emissions from spray gun (lay-up) operations, the permittee shall employ the following formula:

$$E(\text{lay-up}) = \text{summation of } (W_i \times E_{Fi})$$

Where

$E(\text{lay-up})$  = the daily organic compound emissions from lay-up materials (gel coats), in pounds per day;

$i$  = subscript denoting a specific lay-up material (gel coats) employed;

$W_i$  = the weight of lay-up material (gel coats) " $i$ " employed, in tons per day (pounds per day divided by 2000 pounds per ton); and

$E_{Fi}$  = the emission factor for MMA emissions\*, in pounds per ton, from lay-up material (gel coats); where " $E_{Fi}$ " = 75 lbs MMA/ton gel coat at 5% MMA content.

\* This emission factor is based on the MMA content of the gelcoat, determined as calculated in Table 3, titled "Unified Emission Factor (UEF) for Open Molding of Composites", updated July 23, 2001, and from "Technical Discussion of the Unified Emission Factors for Open Molding of Composites", 4/7/99, by Robert A. Haberlein, Ph.D, QEP. This source of emission factors may be revised in the future and is under review by the USEPA's Emission Factors and Inventory Group, to possibly replace existing AP-42 factors for styrene emissions from resin/gel coat applications.

iii. The total daily organic compound emissions is equal to the sum of E.1.a.i and E.1.a.ii for each day (styrene emissions plus methyl methacrylate emissions)

b. Emission Limitation:

Organic compound (OC) emissions shall not exceed 8 lbs/hr.

Applicable Compliance Method:

- i. Compliance with the hourly OC emission limitation shall be determined by dividing the daily OC emission rate in Section C.1.b, calculated in accordance with Section E.1.a, by the actual number of hours the emission unit was in operation (Section C.1.e).
- ii. If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission testing performed in accordance with U.S. EPA Method 18, 25, or 25A, as appropriate.

c. Emission Limitation:

Styrene emissions shall not exceed 4.95 tons styrene/rolling, 365 day period

Applicable Compliance Method:

Compliance with the annual styrene emission limitation shall be determined by summing

Emissions Unit ID: **P001**

the daily styrene emission rates from lay-up materials (resins and gel coat), as recorded in Section C.1.f of these terms and conditions, for any rolling, 365-day period and dividing the sum by 2000 lbs/ton.

d. Emission Limitation:

Methyl methacrylate (MMA) emissions shall not exceed 1.3 tons per rolling, 365-day period.

Applicable Compliance Method:

Compliance with the annual MMA emission limitation shall be determined by summing the daily MMA emission rates from lay-up materials (gel coat), as recorded in Section C.1.g of these terms and conditions, for any rolling, 365-day period and dividing the sum by 2000 lbs/ton.

e. Emission Limitation:

Total organic compound (OC) emissions shall not exceed 6.25 tons per year, excluding cleanup.

Applicable Compliance Method:

Compliance with the total annual OC emission limitation shall be determined by summing the total daily OC emission rates (for styrene and methyl methacrylate), as recorded in Section C.1.h of these terms and conditions.

f. Emission Limitation:

Organic compound (OC) emissions from nonphotochemically reactive cleanup materials shall not exceed 1.7 tons per year.

Applicable Compliance Method:

To calculate the emissions from nonphotochemically reactive cleanup materials, the permittee shall employ the following formula(s):

$$E(\text{npcr\_cleanup}) = \text{summation of } (V_i \times \text{OC}_i)$$

Where:

$E(\text{npcr\_cleanup})$  = the annual OC emissions from all nonphotochemically reactive cleanup materials, in pounds per year.

$i$  = subscript denoting a specific nonphotochemically reactive cleanup material employed.

$V_i$  = the volume of nonphotochemically reactive cleanup material "i" employed, in gallons per year.

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

2. Formulation data or U.S. EPA Method 24 shall be used to determine the styrene contents of all resins and gel coats, the methyl methacrylate content of all gel coats, and the OC content of all cleanup material employed in this emissions unit.

#### **F. Miscellaneous Requirements**

1. The following terms and conditions are federally enforceable: A.1., A.2., B.1., C.1., D.1 and 2. and E.

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

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

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 -Hand lay-up of polyester resin mixes to make fiberglass reinforced parts, booth.	OAC rule 3745-31-05(A)(3)	Organic compound (OC) emissions from nonphotochemically reactive cleanup materials shall not exceed 1.7 TPY.  The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(G)(2) and OAC rule 3745-35-07 (B).  See Sections A.2.a and A.2.b below.
	OAC rule 3745-21-07(G)(2)	Organic compound (OC) emissions shall not exceed 8 lbs/hr and 40 lbs/day.
	OAC rule 3745-35-07(B) Synthetic Minor to avoid Title V status.	Organic compound (OC) emissions, as styrene, shall not exceed 4.95 tons per rolling, 365-day period.  See A.2.c below.

**2. Additional Terms and Conditions**

- 2.a** The emissions of organic material from the resin spray gun operation consist of styrene, a photochemically reactive material and a hazardous air pollutant (HAP).
- 2.b** Acetone and Methylene chloride, non-photochemically reactive materials, shall be the only materials used for cleanup operations.
- 2.c** This restriction limits annual OC emissions to 4.95 tons per rolling, 365-day period, excluding cleanup.

## **B. Operational Restrictions**

- 1.** The maximum annual styrene usage for this emissions unit shall not exceed 4.95 tons per year, based on a rolling, 365-day summation of styrene usage figures. The permittee shall comply with this restriction upon startup, based upon operating records from the previous 365-day period.

## **C. Monitoring and/or Record keeping Requirements**

- 1.** The permittee shall collect and record the following information for each day for this emissions unit:
  - a. The company identification for each lay-up material (resins) employed;
  - b. The amount, in pounds, of each lay-up material (resins) employed;
  - c. The styrene content of each lay-up material (resins), in percent by weight;
  - d. The actual number of hours the emissions unit was in operation;
  - e. The total OC as styrene emission rate for all lay-up materials (resins) employed determined in accordance with Section E.1.a of these terms and conditions, in pounds per day;
  - f. The average hourly OC emission rate for all lay-up materials (resins) employed determined in accordance with Section E.1.b of these terms and conditions, in pounds per hour; and
  - g. The total rolling, 365-day summation of styrene material usage, in pounds per year and tons per year.
- 2.** The permittee shall collect and record the following information for each year for the purpose of determining annual OC emissions.

- a. The volume of each nonphotochemically reactive cleanup material employed, in gallons per year.
  - b. The OC content of each nonphotochemically reactive cleanup material, in pounds per gallon.
  - c. The total OC emission rate for all nonphotochemically reactive cleanup materials, in pounds.
3. The permit to install for this emissions unit (P002) was evaluated based on the actual materials (resins) and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant potentially emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), which has been adjusted for a 6 day and 12 hour per day work week. The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: styrene (assuming worst case)

TLV ( $\text{ug}/\text{m}^3$ ): 85,202

Maximum Hourly Emission Rate (lbs/hr): 8

Predicted 1-Hour Maximum Ground-Level Concentration ( $\text{ug}/\text{m}^3$ ): 483.9

MAGLC ( $\text{ug}/\text{m}^3$ ): 2,028.63

Pollutant: Acetone

TLV ( $\text{ug}/\text{m}^3$ ): 1,187,117

Maximum Hourly Emission Rate (lbs/hr): 0.66

Predicted 1-Hour Maximum Ground-Level Concentration ( $\text{ug}/\text{m}^3$ ): 19.45

MAGLC ( $\text{ug}/\text{m}^3$ ): 28,265

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

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- a. Changes in the composition of the materials used (typically coatings or cleanup materials), or the use of new materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TLV value previously modeled;
- b. Changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any pollutant with a listed TLV that was proposed in the application and modeled; and
- c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Air Toxic Policy" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required.

If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

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

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

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

1. The permittee shall submit quarterly deviation (excursion) reports that include the following information:
  - a. An identification of each day during which the average hourly OC emissions from lay-up materials (resins) exceeded 8 pounds per hour, and the actual average hourly OC emissions for each such day; and

- b. An identification of each day during which the OC emissions from lay-up materials (resins) exceeded 40 pounds per day, and the actual OC emissions for each such day.
2. The permittee shall submit deviation reports which identify all exceedances of the rolling, 365-day styrene emission and usage limitations, as outlined in Condition A.1. and B.1.
3. The permittee shall submit annual reports that specify the total OC emissions from this emissions unit for the previous calendar year. These reports shall be submitted by January 31 of each year.

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

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

- a. Emission Limitation:

Organic compound (OC) emissions shall not exceed 40 lbs/day.

Applicable Compliance Method:

- i. To calculate emissions from resin spray gun (lay-up) operations, the permittee shall employ the following formula:

$$E(\text{lay-up}) = \text{summation of } (W_i \times E_{Fi})$$

Where

$E(\text{lay-up})$  = the daily organic compound emissions from all lay-up materials (resins), in pounds per day;

$i$  = subscript denoting a specific lay-up material (resin) employed;

$W_i$  = the weight of lay-up material (resin) "i" employed, in tons per day (pounds per day divided by 2000 pounds per ton); and

$E_{Fi}$  = the emission factor for styrene emissions\*, in pounds per ton, from lay-up

material (resin) "i" = 157 lbs styrene/ton resin at 47% styrene.

\* This emission factor is based on the styrene content of the resin and the mechanical application type (mechanical atomized), determined as calculated in Table 3, titled "Unified Emission Factor (UEF) for Open Molding of Composites", updated July 23, 2001, and from "Technical Discussion of the Unified Emission Factors for Open Molding of Composites", 4/7/99, by Robert A. Haberlein, Ph.D, QEP. This source of emission factors may be revised in the future and is under review by the USEPA's Emission Factors and Inventory Group, to possibly replace existing AP-42 factors for styrene emissions from resin/gel coat applications.

b. Emission Limitation:

Organic compound (OC) emissions shall not exceed 8 lbs/hr.

Applicable Compliance Method:

- i. Compliance with the hourly OC emission limitation shall be determined by dividing the daily OC emission rate in Section C.1.e, calculated in accordance with Section E.1.a, by the actual number of hours the emission unit was in operation (Section C.1.d).
- ii. If required, the permittee shall demonstrate compliance with the hourly OC emission limitation through emission testing performed in accordance with U.S. EPA Method 18, 25, or 25A, as appropriate.

c. Emission Limitation:

Organic compound (OC) emissions, as styrene, shall not exceed 4.95 tons per rolling, 365-day period.

Applicable Compliance Method:

Compliance with the annual OC emission limitation shall be determined by summing the daily OC emission rates from lay-up materials (resins), as recorded in Section C.1.e of these terms and conditions, for the calendar year and dividing the sum by 2000 lbs/ton.

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## d. Emission Limitation:

Organic compound (OC) emissions from nonphotochemically reactive cleanup materials shall not exceed 1.7 tons per year.

Applicable Compliance Method:

To calculate the emissions from nonphotochemically reactive cleanup materials, the permittee shall employ the following formula(s):

$$E(\text{npcr\_cleanup}) = \text{summation of } (V_i \times OC_i)$$

Where:

$E(\text{npcr\_cleanup})$  = the annual OC emissions from all nonphotochemically reactive cleanup materials, in pounds per year.

$i$  = subscript denoting a specific nonphotochemically reactive cleanup material employed.

$V_i$  = the volume of nonphotochemically reactive cleanup material "i" employed, in gallons per year.

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

2. Formulation data or U.S. EPA Method 24 shall be used to determine the styrene contents of all resins employed in this emissions unit.

**F. Miscellaneous Requirements**

1. The following terms and conditions are federally enforceable: A.1., A.2., B.1., C.1., D.1 and 2. and E.