

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **date, 2010**

Region: Raleigh Regional Office
County: Edgecombe
NC Facility ID: 3300170
Inspector's Name: Will Wike
Date of Last Inspection: 02/24/2010
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): HC Composites LLC Facility Address: HC Composites LLC 1090 West Saint James Street Tarboro, NC 27886 SIC: 3732 / Boat Building And Repairing NAICS: 336612 / Boat Building Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 3300170.10A Date Received: 03/18/2010 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 08819/T04 Existing Permit Issue Date: 01/20/2006 Existing Permit Expiration Date: 12/31/2010
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Review Engineer: Mark Cuilla Review Engineer's Signature: Date: date, 2010		Comments / Recommendations: Issue 08819/T05 Permit Issue Date: date, 2010 Permit Expiration Date: date, 2015	

I. Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (**08819T04**) was issued on **January 20, 2006**, and is scheduled to expire on **December 31, 2010**. The renewal application was received on **March 18, 2010**, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

II. Facility Description

The facility is a boat manufacturer.

III. History/Background/Application Chronology

March 18, 2010 – Permit application **3300170.10A** was received for the renewal of the Title V air permit.

June 7, 2010 – DRAFT permit sent to Permittee and RRO for comment prior to public notice and EPA review.

date, 2010 – DRAFT sent to 30-day public notice and 45-day EPA review prior to issuance.

IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

Page	Section	Description
Cover	-	-amended all dates and permit revision numbers
All	Header	-amended permit revision number
3	2.1 A (table)	-added reference to 15A NCAC 2Q .0705
4-15	2.1 A.1-17	-updated MACT 40 CFR 63, Subpart VVVV language to most recent shell version (no new requirements over existing language)
17	2.1 A.22	-added 15A NCAC 2Q .0705 language
17-27	General Conditions	-updated shell conditions (v3.1)
Attachment	List of Acronyms	-added acronyms for CAIR, NAA, and RACT

Note. ESM was checked and all equipment/control device descriptions were brought up to date with current guidelines.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0958, Work Practice Standards for Sources of Volatile Organic Compounds
15A NCAC 2D .1100, Control of Toxic Air Pollutants
15A NCAC 2D .1111, Maximum Achievable Control Technology (40 CFR 63, Subpart VVVV)
15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
15A NCAC 2Q .0711, Emission Rates Requiring a Permit

A regulatory review for the existing sources will not be included in this document. However, as part of this permit renewal, the following regulation has been added to the permit:

15A NCAC 2Q .0705, Existing Sources and SIC Calls

It should be noted that permit **08819R03** included requirements for particulate emissions (15A NCAC 2D .0515) and visible emissions (15A NCAC 2D .0521). However, as the first time Title V permit was being processed it was determined that neither regulation was applicable to this facility and therefore not included in **08819T04**. This decision was based on the following:

1. The then current permit did not include any monitoring, recordkeeping, or reporting for either of the two requirements; and

2. The only expected particulate emissions and subsequent visible emissions from boat manufacturing are from the grinding, sanding, and clean-up of the boat hulls and miscellaneous parts after the resin has had a chance to cure. These activities take place inside the facility with internally vented filters to eliminate styrene dust from the work areas of the facility

This permit renewal continues this decision.

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The facility is not subject to any New Source Performance Standards. This permit renewal does not affect this status.

NESHAPS/MACT/GACT – The facility is subject to the National Emission Standards for Hazardous Air Pollutants for Boat Manufacturers (40 CFR 63, Subpart VVVV). The current permit includes specific requirements of the MACT. This permit renewal does not affect this status. However as part of the permit renewal, the version of the MACT language has been replaced with the most recent shell language for this MACT. This modification does not add any new requirements or remove any current requirements to the facility. The following language now appears in the renewed permit:

1. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63 Subpart VVVV)

- a. For all sources located at this facility, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, “Maximum Achievable Control Technology” (MACT) as promulgated in 40 CFR Part 63, Subpart VVVV. In the event of any wording discrepancy between the terms of this permit and Federal requirements found at 40 CFR 63, the language found at 40 CFR 63 shall control.

2. 40 CFR 63.5698 Open Molding Resin and Gel Coat Operations

- a. Excluding those processes listed in Section 2.1.A.1.d below, the Permittee shall limit organic HAP emissions from any open molding operations listed above to the emission limit specified in paragraph (b) of this condition. Operations listed in paragraph (d) are exempt from this limit.
 - i. Production resin.
 - ii. Pigmented gel coat.
 - iii. Clear gel coat.
 - iv. Tooling resin.
 - v. Tooling gel coat.
- b. Limit organic HAP emissions from open molding operations to the limit specified by equation 1 of this condition, based on a 12-month rolling average.

$$\text{HAP Limit} = [46(M_R) + 159(M_{PG}) + 291(M_{CG}) + 54(M_{TR}) + 214(M_{TG})] \text{ (Equation 1)}$$

Where: HAP Limit = total allowable organic HAP that can be emitted from the open molding operations, kilograms.

M_R = mass of production resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this condition, megagrams.

M_{PG} = mass of pigmented gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this condition, megagrams.

M_{CG} = mass of clear gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this condition, megagrams.

M_{TR} = mass of tooling resin used in the past 12 months, excluding any materials exempt under paragraph (d) of this condition, megagrams.

M_{TG} = mass of tooling gel coat used in the past 12 months, excluding any materials exempt under paragraph (d) of this condition, megagrams.

- c. The open molding emission limit is the same for both new and existing sources.
- d. The materials specified in paragraphs (d)(i) through (iii) of this condition are exempt from the open molding emission limit specified in paragraph (b) of this condition.
 - i. Production resins (including skin coat resins) that must meet specifications for use in military vessels or must be approved by the U.S. Coast Guard for use in the construction of lifeboats, rescue boats, and other life-saving appliances approved under 46 CFR subchapter Q or the construction of small passenger vessels regulated by 46 CFR subchapter T. Production resins for which this exemption is used must be applied with nonatomizing (non-spray) resin application equipment. A record must be kept of the resins which are being used for this exemption.
 - ii. Pigmented, clear, and tooling gel coat used for part or mold repair and touch up. The total gel coat materials included in this exemption must not exceed 1 percent by weight of all gel coat used at the facility on a 12-month rolling-average basis. A record must be kept of the amount of gel coats which are being used for this exemption and copies of calculations showing that the exempt amount does not exceed 1 percent of all gel coat used.
 - iii. Pure, 100 percent vinylester resin used for skin coats. This exemption does not apply to blends of vinylester and polyester resins used for skin coats. The total resin materials included in the exemption cannot exceed 5 percent by weight of all resin used at the facility on a 12-month rolling-average basis. A record must be kept of the amount of 100 percent vinylester skin coat resin used per month that is eligible for this exemption and copies of calculations showing that the exempt amount does not exceed 5 percent of all resin used.

3. 40 CFR 63.5731 Standards for Resin and Gel Coat Mixing Operations

- a. All resin and gel coat mixing containers with a capacity equal to or greater than 208 liters, including those used for on-site mixing of putties and polyputties, must have a cover with no visible gaps in place at all times.
- b. The work practice standard in paragraph (a) of this condition does not apply when material is being manually added to or removed from a container, or when mixing or pumping equipment is being placed in or removed from a container.
- c. To demonstrate compliance with the work practice standard in paragraph (a) of this condition, the Permittee must visually inspect all mixing containers subject to this standard at least once per month. The inspection should ensure that all containers have covers with no visible gaps between the cover and the container, or between the cover and equipment passing through the cover.
- d. The Permittee must keep records of which mixing containers are subject to this standard and the results of the inspections, including a description of any repairs or corrective actions taken.

4. 40 CFR 63.5734 Standards for Resin and Gel Coat Application Equipment Cleaning Operations

- a. For routine flushing of resin and gel coat application equipment (e.g., spray guns, flowcoaters, brushes, rollers, and squeegees), the Permittee must use a cleaning solvent that contains no more than 5 percent organic HAP by weight. For removing cured resin or gel coat from application equipment, no organic HAP content limit applies.
- b. The Permittee must store organic HAP-containing solvents used for removing cured resin or gel coat in containers with covers. The covers must have no visible gaps and must be in place at all times, except when equipment to be cleaned is placed in or removed from the container. On containers with a capacity greater than 7.6 liters, the distance from the top of the container to the solvent surface must be no less than 0.75 times the diameter of the container. Containers that store organic HAP-containing solvents used for removing cured resin or gel coat are exempt from the requirements of 40 CFR Part 63, subpart T (National Emission Standards for Halogenated Solvent Cleaning). Cured resin or gel coat means resin or gel coat that has changed from a liquid to a solid.

5. 40 CFR 63.5701 Complying With the Open Molding Emission Limit - Use one or more of the options listed in paragraphs (a) through (b) of this condition to meet the emission limit in 40 CFR 63.5698 for the resins and gel coats used in open molding operations at the facility.

- a. Maximum achievable control technology (MACT) model point value averaging (emissions averaging) option.
 - i. Demonstrate that emissions from the open molding resin and gel coat operations that are averaged meet the emission limit in 40 CFR 63.5698 using the procedures described in 40 CFR 63.5710. Compliance with this option is based on a 12-month rolling average.
 - ii. Those operations and materials not included in the emissions average must comply with paragraph (b) of this condition.
- b. Compliant materials option. Demonstrate compliance by using resins and gel coats that meet the organic HAP content requirements in Table 2 (given below) as contained in 40 CFR 63 subpart VVVV. Compliance with this option is based on a 12-month rolling average.

Table 2 to Subpart VVVV of Part 63 – Alternative Organic HAP Content Requirements for Open Molding Resin and Gel Coat Operations

<i>For this operation-</i>	<i>And this application method-</i>	<i>You must not exceed this weighted-average organic HAP content (weight percent) requirement-</i>
<i>1. Production resin operations</i>	<i>Atomized (spray)</i>	<i>28 percent</i>
<i>2. Production resin operations</i>	<i>Nonatomized (nonspray)</i>	<i>35 percent</i>
<i>3. Pigmented gel coat operations</i>	<i>Any method</i>	<i>33 percent</i>
<i>4. Clear gel coat operations</i>	<i>Any method</i>	<i>48 percent</i>
<i>5. Tooling resin operations</i>	<i>Atomized (spray)</i>	<i>30 percent</i>
<i>6. Tooling resin operations</i>	<i>Nonatomized (nonspray)</i>	<i>39 percent</i>
<i>7. Tooling gel coat operations</i>	<i>Any method</i>	<i>40 percent</i>

6. 40 CFR 63.5704 General Requirements for Complying With the Open Molding Emission Limit

- a. *Emissions averaging option. For those open molding operations and materials complying using the emissions averaging option, compliance must be demonstrated by performing the steps in paragraphs (a)(i) through (v) of this condition.*
 - i. *Use the methods specified in 40 CFR 63.5758 to determine the organic HAP content of resins and gel coats.*
 - ii. *Complete the calculations described in 40 CFR 63.5710 to show that the organic HAP emissions do not exceed the limit specified in 40 CFR 63.5698.*
 - iii. *Keep records as specified in paragraphs (a)(iii)(A) through (D) of this condition for each resin and gel coat.*
 - A. *Hazardous air pollutant content.*
 - B. *Amount of material used per month.*
 - C. *Application method used for production resin and tooling resin. This record is not required if all production resins and tooling resins are applied with nonatomized technology.*
 - D. *Calculations performed to demonstrate compliance based on MACT model point values, as described in 40 CFR 63.5710.*
 - iv. *Prepare and submit the implementation plan described in 40 CFR 63.5707 to the Division and keep it up to date.*
 - v. *Submit semiannual compliance reports to the Division as specified in 40 CFR 63.5764.*
- b. *Compliant materials option. For each open molding operation complying using the compliant materials option, compliance must be demonstrated by performing the steps in paragraphs (b)(i) through (iv) of this condition.*
 - i. *Use the methods specified in 40 CFR 63.5758 to determine the organic HAP content of resins and gel coats.*
 - ii. *Complete the calculations described in 40 CFR 63.5713 to show that the weighted-average organic HAP content does not exceed the limit specified in Table 2 40 CFR 63 subpart VVVV.*
 - iii. *Keep records as specified in paragraphs (b)(iii)(A) through (D) of this condition for each resin and gel coat.*
 - A. *Hazardous air pollutant content.*
 - B. *Application method for production resin and tooling resin. This record is not required if all production resins and tooling resins are applied with nonatomized technology.*
 - C. *Amount of material used per month. This record is not required for an operation if all materials used for that operation comply with the organic HAP content requirements.*
 - D. *Calculations performed, if required, to demonstrate compliance based on weighted-average organic HAP content as described in 40 CFR 63.5713.*
 - iv. *Submit semiannual compliance reports to the Division as specified in 40 CFR 63.5764.*

7. 40 CFR 63.5707 Implementation Plan For Open Molding Operations

- a. *An implementation plan must be prepared for all open molding operations that show compliance by using the emissions averaging option described in 40 CFR 63.5704(a).*
- b. *The implementation plan must describe the steps that will be taken to bring the open molding operations covered by this subpart into compliance. For each operation included in the emissions average, the Permittee's implementation plan must include the elements listed in paragraphs (b)(i) through (iii) of this condition.*

- i. A description of each operation included in the average.
- ii. The maximum organic HAP content of the materials used, the application method used (if any atomized resin application methods are used in the average), and any other methods used to control emissions.
- iii. Calculations showing that the operations covered by the plan will comply with the open molding emission limit specified in 40 CFR 63.5698.
- c. The Permittee must submit the implementation plan to the Division with the notification of compliance status specified in 40 CFR 63.5761.
- d. The Permittee must keep the implementation plan on site and provide it to the Division when asked.
- e. If the Permittee revises the implementation plan, the revised plan must be submitted with the next semiannual compliance report specified in 40 CFR 63.5764.

8. 40 CFR 63.5710 Demonstrating Compliance Using Emissions Averaging

- a. Compliance using the emissions averaging option is demonstrated on a 12-month rolling-average basis and is determined at the end of every month (12 times per year). The first 12-month rolling-average period begins on the compliance date specified in 40 CFR 63.5695.
- b. At the end of the twelfth month after the Permittee's compliance date and at the end of every subsequent month, use equation 1 of this condition to demonstrate that the organic HAP emissions from those operations included in the average do not exceed the emission limit in 40 CFR 63.5698 calculated for the same 12-month period. (Include terms in equation 1 of 40 CFR 63.5698 and equation 1 of this condition for only those operations and materials included in the average.)

$$\text{HAP emissions} = [(PV_R)(M_R) + (PV_{PG})(M_{PG}) + (PV_{CG})(M_{CG}) + (PV_{TR})(M_{TR}) + (PV_{TG})(M_{TG})]$$

(Equation 1)

Where: HAP emissions = Organic HAP emissions calculated using MACT model point values for each operation included in the average, kilograms.

PV_R = Weighted-average MACT model point value for production resin used in the past 12 months, kilograms per megagram.

M_R = Mass of production resin used in the past 12 months, megagrams.

PV_{PG} = Weighted-average MACT model point value for pigmented gel coat used in the past 12 months, kilograms per megagram.

M_{PG} = Mass of pigmented gel coat used in the past 12 months, megagrams.

PV_{CG} = Weighted-average MACT model point value for clear gel coat used in the past 12 months, kilograms per megagram.

M_{CG} = Mass of clear gel coat used in the past 12 months, megagrams.

PV_{TR} = Weighted-average MACT model point value for tooling resin used in the past 12 months, kilograms per megagram.

M_{TR} = Mass of tooling resin used in the past 12 months, megagrams.

PV_{TG} = Weighted-average MACT model point value for tooling gel coat used in the past 12 months, kilograms per megagram.

M_{TG} = Mass of tooling gel coat used in the past 12 months, megagrams.

- c. At the end of every month, use equation 2 of this condition to compute the weighted-average MACT model point value for each open molding resin and gel coat operation included in the average.

$$PV_{OP} = \frac{\sum_{i=1}^n M_i PV_i}{\sum_{i=1}^n M_i} \quad (\text{Equation 2})$$

Where: PV_{OP} = weighted-average MACT model point value for each open molding operation (PV_R , PV_{PG} , PV_{CG} , PV_{TR} , and PV_{TG}) included in the average, kilograms of HAP per megagram of material applied.

M_i = mass of resin or gel coat i used within an operation in the past 12 months, megagrams.

n = number of different open molding resins and gel coats used within an operation in the past 12 months.

PV_i = the MACT model point value for resin or gel coat i used within an operation in the past 12 months, kilograms of HAP per megagram of material applied.

- d. The equations in Table 3 (given below), as contained in 40 CFR 63 subpart VVVV, must be used to calculate the MACT model point value (PV_i) for each resin and gel coat used in each operation in the past 12 months.

Table 3 to Subpart VVVV of Part 63 – MACT Model Point Value Formulas for Open Molding Operations¹

1. Production resin, tooling resin.	a. Atomized	$0.014 \times (\text{Resin HAP}\%)^{2.425}$
	b. Atomized, plus vacuum bagging with roll-out.	$0.01185 \times (\text{Resin HAP}\%)^{2.425}$
	c. Atomized, plus vacuum bagging without roll-out.	$0.00945 \times (\text{Resin HAP}\%)^{2.425}$
	d. Nonatomized	$0.014 \times (\text{Resin HAP}\%)^{2.275}$
	e. Nonatomized, plus vacuum bagging with roll-out.	$0.0110 \times (\text{Resin HAP}\%)^{2.275}$
	f. Nonatomized, plus vacuum bagging without roll-out.	$0.0076 \times (\text{Resin HAP}\%)^{2.275}$
2. Pigmented gel coat, clear gel coat, tooling gel coat.	All methods.	$0.445 \times (\text{Gel coat HAP}\%)^{1.675}$

¹Equations calculate MACT model point value in kilograms of organic HAP per megagrams of resin or gel coat applied. The equations for vacuum bagging with roll-out are applicable when a facility rolls out the applied resin and fabric prior to applying the vacuum bagging materials. The equations for vacuum bagging without roll-out are applicable when a facility applies the vacuum bagging materials immediately after resin application without rolling out the resin and fabric. HAP% = organic HAP content as supplied, expressed as a weight-percent value between 0 and 100 percent.

- e. If the organic HAP emissions, as calculated in paragraph (b) of this condition, are less than the organic HAP limit calculated in 40 CFR 63.5698(b) for the same 12-month period, then the Permittee is in compliance with the emission limit in 40 CFR 63.5698 for those operations and materials included in the average.

9. 40 CFR 63.5713 Demonstrating Compliance Using Compliant Materials

- a. Compliance using the organic HAP content requirements listed in Table 2 (given below), as contained in 40 CFR 63 subpart VVVV, is based on a 12-month rolling average that is calculated at the end of every month. The first 12-month rolling-average period begins on the compliance date specified in 40 CFR 63.5695. If the Permittee is using filled material (production resin or tooling resin), the Permittee must comply according to the procedure described in 40 CFR 63.5714.

Table 2 to Subpart VVVV of Part 63 – Alternative Organic HAP Content Requirements for Open Molding Resin and Gel Coat Operations

<i>For this operation -</i>	<i>And this application method -</i>	<i>You must not exceed this weighted-average organic HAP content (weight percent) requirement -</i>
<i>1. Production resin operations</i>	<i>Atomized (spray)</i>	<i>28 percent</i>
<i>2. Production resin operations</i>	<i>Nonatomized (nonspray)</i>	<i>35 percent</i>
<i>3. Pigmented gel coat operations</i>	<i>Any method</i>	<i>33 percent</i>
<i>4. Clear gel coat operations</i>	<i>Any method</i>	<i>48 percent</i>
<i>5. Tooling resin operations</i>	<i>Atomized (spray)</i>	<i>30 percent</i>
<i>6. Tooling resin operations</i>	<i>Nonatomized (nonspray)</i>	<i>39 percent</i>
<i>7. Tooling gel coat operations</i>	<i>Any method</i>	<i>40 percent</i>

- b. At the end of the twelfth month after the Permittee’s compliance date and at the end of every subsequent month, review the organic HAP contents of the resins and gel coats used in the past 12 months in each operation. If all resins and gel coats used in an operation have organic HAP contents no greater than the applicable organic HAP content limits in Table 2, as contained in 40 CFR 63 subpart VVVV, then the Permittee is in compliance with the emission limit specified in 40 CFR 63.5698 for that 12-month period for that operation. In addition, the Permittee does not need to complete the weighted- average organic HAP content calculation contained in paragraph (c) of this condition for that operation.
- c. At the end of every month, the Permittee must use equation 1 of this condition to calculate the weighted-average organic HAP content for all resins and gel coats used in each operation in the past 12 months.

$$\text{Weighted-Average HAP Content (\%)} = \frac{\sum_{i=1}^n M_i \text{HAP}_i}{\sum_{i=1}^n M_i} \quad (\text{Equation 1})$$

Where: M_i = mass of open molding resin or gel coat i used in the past 12 months in an operation, megagrams.

HAP_i = Organic HAP content, by weight percent, of open molding resin or gel coat i used in the past 12 months in an operation. Use the methods in 40 CFR 63.5758 to determine organic HAP content.

n = number of different open molding resins or gel coats used in the past 12 months in an operation.

- d. If the weighted-average organic HAP content does not exceed the applicable organic HAP content limit specified in Table 2 as contained in 40 CFR 63 subpart VVVV, then the Permittee is in compliance with the emission limit specified in 40 CFR 63.5698.

10. 40 CFR 63.5714 Demonstrating Compliance if Using Filled Resins

- a. If the Permittee is using a filled production resin or filled tooling resin, the Permittee must demonstrate compliance for the filled material on an as-applied basis using equation 1 of this condition.

$$PV_F = PV_u \frac{100 - \% \text{ Filler}}{100} \quad (\text{Equation 1})$$

Where: PV_F = The as-applied MACT model point value for a filled production resin or tooling resin, kilograms organic HAP per megagram of filled material.

PV_u = The MACT model point value for the neat (unfilled) resin, before filler is added, as calculated using the formulas in Table 3 (given below) as contained in 40 CFR 63 subpart VVVV.

% Filler = The weight-percent of filler in the as applied filled resin system.

Table 3 to Subpart VVVV of Part 63 – MACT Model Point Value Formulas for Open Molding Operations¹

1. Production resin, tooling resin.	a. Atomized	$0.014 \times (\text{Resin HAP}\%)^{2.425}$
	b. Atomized, plus vacuum bagging with roll-out.	$0.01185 \times (\text{Resin HAP}\%)^{2.425}$
	c. Atomized, plus vacuum bagging without roll-out.	$0.00945 \times (\text{Resin HAP}\%)^{2.425}$
	d. Nonatomized	$0.014 \times (\text{Resin HAP}\%)^{2.275}$
	e. Nonatomized, plus vacuum bagging with roll-out.	$0.0110 \times (\text{Resin HAP}\%)^{2.275}$
	f. Nonatomized, plus vacuum bagging without roll-out.	$0.0076 \times (\text{Resin HAP}\%)^{2.275}$
2. Pigmented gel coat, clear gel coat, tooling gel coat.	All methods....	$0.445 \times (\text{Gel coat HAP}\%)^{1.675}$

¹Equations calculate MACT model point value in kilograms of organic HAP per megagrams of resin or gel coat applied. The equations for vacuum bagging with roll-out are applicable when a facility rolls out the applied resin and fabric prior to applying the vacuum bagging materials. The equations for vacuum bagging without roll-out are applicable when a facility applies the vacuum bagging materials immediately after resin application without rolling out the resin and fabric. HAP% = organic HAP content as supplied, expressed as a weight-percent value between 0 and 100 percent.

- b. If the filled resin is used as a production resin and the value of PV_F calculated by equation 1 of this condition does not exceed 46 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.
- c. If the filled resin is used as a tooling resin and the value of PV_F calculated by equation 1 of this condition does not exceed 54 kilograms of organic HAP per megagram of filled resin applied, then the filled resin is in compliance.

- d. *If the Permittee is including a filled resin in the emissions averaging procedure described in 40 CFR 63.5710, then use the value of PV_F calculated using equation 1 of this condition for the value of PV_i in equation 2 of 40 CFR 63.5710.*

11. 40 CFR 63.5737 Demonstrating Compliance with the Resin and Gel Coat Application Equipment Cleaning Standards

- a. *Determine and record the organic HAP content of the cleaning solvents subject to the standards specified in 40 CFR 63.5734 using the methods specified in 40 CFR 63.5758.*
- b. *If the Permittee recycles cleaning solvents on site, the Permittee may use documentation from the solvent manufacturer or supplier or a measurement of the organic HAP content of the cleaning solvent as originally obtained from the solvent supplier for demonstrating compliance, subject to the conditions in 40 CFR 63.5758 for demonstrating compliance with organic HAP content limits.*
- c. *At least once per month, the Permittee must visually inspect any containers holding organic HAP-containing solvents used for removing cured resin and gel coat to ensure that the containers have covers with no visible gaps. Keep records of the monthly inspections and any repairs made to the covers.*

12. 40 CFR 63.5740 Demonstrating Compliance with Carpet and Fabric Adhesive Operations

- a. *The Permittee must use carpet and fabric adhesives that contain no more than 5 percent organic HAP by weight.*
- b. *To demonstrate compliance with the emission limit in paragraph (a) of this section, you must determine and record the organic HAP content of the carpet and fabric adhesives using the methods in 40 CFR 63.5758.*

13. 40 CFR 63.5758 Determine The Organic HAP Content Of Materials

- a. *Determine the organic HAP content for each material used. To determine the organic HAP content for each material used in the Permittee's open molding resin and gel coat operations, carpet and fabric adhesive operations, or aluminum recreational boat surface coating operations, the Permittee must use one of the options in paragraphs (a)(i) through (vi) of this condition.*
 - i. *Method 311 (appendix A to 40 CFR part 63). The Permittee may use Method 311 for determining the mass fraction of organic HAP. Use the procedures specified in paragraphs (a)(i)(A) and (B) of this condition when determining organic HAP content by Method 311.*
 - A. *Include in the organic HAP total each organic HAP that is measured to be present at 0.1 percent by mass or more for Occupational Safety and Health Administration (OSHA)-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is measured to be 0.5 percent of the material by mass, the Permittee does not need to include it in the organic HAP total. Express the mass fraction of each organic HAP the Permittee measures as a value truncated to four places after the decimal point (for example, 0.1234).*
 - B. *Calculate the total organic HAP content in the test material by adding up the individual organic HAP contents and truncating the result to three places after the decimal point (for example, 0.123).*

- ii. *Method 24 (appendix A to 40 CFR part 63). The Permittee may use Method 24 to determine the mass fraction of non-aqueous volatile matter of aluminum coatings and use that value as a substitute for mass fraction of organic HAP.*
- iii. *ASTM D1259-85 (Standard Test Method for Nonvolatile Content of Resins). The Permittee may use ASTM D1259-85 (available for purchase from ASTM) to measure the mass fraction of volatile matter of resins and gel coats for open molding operations and use that value as a substitute for mass fraction of organic HAP.*
- iv. *Alternative method. The Permittee may use an alternative test method for determining mass fraction of organic HAP if the Permittee obtains prior approval by EPA Region IV. The Permittee must follow the procedure in 40 CFR 63.7(f) to submit an alternative test method for approval.*
- v. *Information from the supplier or manufacturer of the material. The Permittee may rely on information other than that generated by the test methods specified in paragraphs (a)(i) through (iv) of this condition, such as manufacturer's formulation data, according to paragraphs (a)(v)(A) and (C) of this condition.*
 - A. *Include in the organic HAP total each organic HAP that is present at 0.1 percent by mass or more for OSHA-defined carcinogens as specified in 29 CFR 1910.1200(d)(4) and at 1.0 percent by mass or more for other compounds. For example, if toluene (not an OSHA carcinogen) is 0.5 percent of the material by mass, the Permittee does not have to include it in the organic HAP total.*
 - B. *If the organic HAP content is provided by the material supplier or manufacturer as a range, then the Permittee must use the upper limit of the range for determining compliance. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(i) through (iv) of this condition exceeds the upper limit of the range of the total organic HAP content provided by the material supplier or manufacturer, then the Permittee must use the measured organic HAP content to determine compliance.*
 - C. *If the organic HAP content is provided as a single value, the Permittee may assume the value is a manufacturing target value and actual organic HAP content may vary from the target value. If a separate measurement of the total organic HAP content using the methods specified in paragraphs (a)(i) through (iv) of this condition is less than 2 percentage points higher than the value for total organic HAP content provided by the material supplier or manufacturer, then the Permittee may use the provided value to demonstrate compliance. If the measured total organic HAP content exceeds the provided value by 2 percentage points or more, then the Permittee must use the measured organic HAP content to determine compliance.*
- vi. *Solvent blends. Solvent blends may be listed as single components for some regulated materials in certifications provided by manufacturers or suppliers. Solvent blends may contain organic HAP which must be counted toward the total organic HAP content of the materials. When detailed organic HAP content data for solvent blends are not available, the Permittee may use the values for organic HAP content that are listed in Table 5 or 6 as contained in 40 CFR 63 subpart VVVV. The Permittee may use Table 6 as contained in 40 CFR 63 subpart VVVV, only if the solvent blends in the materials the Permittee use do not match any of the solvent blends in Table 5 as contained in 40 CFR 63 subpart VVVV, and the Permittee know only whether the blend is either aliphatic or aromatic. However, if test results indicate higher values than those listed in Table 5 or 6 as contained in 40 CFR 63 subpart VVVV, then the test results must be used for determining compliance.*

14. 40 CFR 63.5764 What Reports Must Be Submitted and When?

- a. *The Permittee must submit the applicable reports specified in paragraphs (b) through (c) of this condition. To the extent possible, the Permittee must organize each report according to the operations covered by this subpart and the compliance procedure followed for that operation.*
- b. *Under 40 CFR 63.10(a), the Permittee must submit each report by the dates in paragraphs (b)(i) through (v) of this condition.*
 - i. *If the Permittee's source is not controlled by an add-on control device (i.e., the Permittee is complying with organic HAP content limits, application equipment requirements, or MACT model point value averaging provisions), the first compliance report must cover the period beginning 12 months after the compliance date specified for the Permittee's source in 40 CFR 63.5695 and ending on June 30 or December 31, whichever date is the first date following the end of the first 12-month period after the compliance date that is specified for the Permittee's source in 40 CFR 63.5695. If the Permittee's source is controlled by an add-on control device, the first compliance report must cover the period beginning on the compliance date specified for the Permittee's source in 40 CFR 63.5695 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for the Permittee's source in 40 CFR 63.5695.*
 - ii. *The first compliance report must be postmarked or delivered no later than 60 calendar days after the end of the compliance reporting period specified in paragraph (b)(i) of this condition.*
 - iii. *Each subsequent compliance report must cover the applicable semiannual reporting period from January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.*
 - iv. *Each subsequent compliance report must be postmarked or delivered no later than 60 calendar days after the end of the semiannual reporting period.*
 - v. *For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), the Permittee may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(i) through (iv) of this condition.*
- c. *The compliance report must include the information specified in paragraphs (c)(i) through (vii) of this condition.*
 - i. *Company name and address.*
 - ii. *A statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the report.*
 - iii. *The date of the report and the beginning and ending dates of the reporting period.*
 - iv. *A description of any changes in the manufacturing process since the last compliance report.*
 - v. *A statement or table showing, for each regulated operation, the applicable organic HAP content limit, application equipment requirement, or MACT model point value averaging provision with which the Permittee is complying. The statement or table must also show the actual weighted-average organic HAP content or weighted-average MACT model point value (if applicable) for each operation during each of the rolling 12-month averaging periods that end during the reporting period.*

- vi. *If the Permittee was in compliance with the emission limits and work practice standards during the reporting period, the Permittee must include a statement to that effect.*
- vii. *If the Permittee deviated from an emission limit or work practice standard during the reporting period, the Permittee must also include the information listed in paragraphs (c)(vii)(A) through (D) of this condition in the semiannual compliance report.*
 - A. *A description of the operation involved in the deviation.*
 - B. *The quantity, organic HAP content, and application method (if relevant) of the materials involved in the deviation.*
 - C. *A description of any corrective action the Permittee took to minimize the deviation and actions the Permittee has taken to prevent it from happening again.*
 - D. *A statement of whether or not the Permittee was in compliance for the 12 month averaging period that ended at the end of the reporting period.*

15. 40 CFR 63.5767 Records

The Permittee must keep the records specified in paragraphs (a) through (c) of this condition in addition to records specified in individual conditions of this subpart.

- a. *The Permittee must keep a copy of each notification and report that the Permittee submitted to comply with this subpart.*
- b. *The Permittee must keep all documentation supporting any notification or report that the Permittee submitted.*
- c. *If the Permittee is not controlled by an add-on control device (i.e., the Permittee is complying with organic HAP content limits, application equipment requirements, or MACT model point value averaging provisions), the Permittee must keep the records specified in paragraphs (c)(i) through (iii) of this condition.*
 - i. *The total amounts of open molding production resin, pigmented gel coat, clear gel coat, tooling resin, and tooling gel coat used per month and the weighted-average organic HAP contents for each operation, expressed as weight-percent. For open molding production resin and tooling resin, the Permittee must also record the amounts of each applied by atomized and nonatomized methods.*
 - ii. *The total amount of each aluminum coating used per month (including primers, top coats, clear coats, thinners, and activators) and the weighted-average organic HAP content as determined in 40 CFR 63.5752.*
 - iii. *The total amount of each aluminum wipedown solvent used per month and the weighted-average organic HAP content as determined in 40 CFR 63.5749.*

16. 40 CFR 63.5770 How Long Must Records Be Kept?

- a. *The Permittee's records must be readily available and in a form so they can be easily inspected and reviewed.*
- b. *The Permittee must keep each record for 5 years following the date that each record is generated.*
- c. *The Permittee must keep each record on site for at least 2 years after the date that each record is generated. The Permittee can keep the records offsite for the remaining 3 years.*
- d. *The Permittee can keep the records on paper or an alternative media, such as microfilm, computer, computer disks, magnetic tapes, or on microfiche.*

17. 40 CFR 63.5761 Notifications

- a. *The Permittee must submit all of the notifications in Table 7 as contained in 40 CFR 63 subpart VVVV, that apply to the Permittee by the dates in the table. The notifications are described more fully in 40 CFR Part 63, subpart A, General Provisions, referenced in Table 8 as contained in 40 CFR 63 subpart VVVV.*
- b. *If the Permittee changes any information submitted in any notification, the Permittee must submit the changes in writing to the Division within 15 calendar days after the change. The Permittee may switch between the compliance options (Emissions Averaging and Compliant Materials) in 40CFR63, Subpart VVVV per the following requirements. In all cases, the Permittee shall submit notification to change options, in writing, to the Division of Air Quality, 15 days prior to changing compliance options.*
 - i. *Changing from Compliant Materials (40 CFR 63.5713) to 12-month Emissions Averaging (40 CFR 63.5710): The Permittee shall begin collecting resin and gel coat usage data on the date the compliance option is switched. The source shall demonstrate compliance using the Emissions Averaging option for at least 12 consecutive months.*
 - ii. *Changing from 12-month Emissions Averaging (40 CFR 63.5710) to Compliant Materials (40 CFR 63.5713): The Permittee shall begin complying with the Compliant Materials option on the date the compliance option is switched. Until the full 12-month compliance period has ended the Permittee shall continue to collect resin and gel coat usage data and calculate the 12-month emissions average.*

This permit contains compliance certification, monitoring, reporting, and record keeping requirements sufficient to assure compliance with the terms and conditions of this permit. All submittals required by these conditions shall be sent to the North Carolina Division of Air Quality at the following address:

*North Carolina Division of Air Quality
Raleigh Regional Office
3800 Barrett Drive, Suite 101
Raleigh, North Carolina 27609*

PSD – The facility is not subject to any Prevention of Significant Deterioration requirements. This permit renewal does not affect this status.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-control emissions above the major source threshold, and use a control device to meet an applicable standard. The facility does not have control devices installed; therefore, CAM does not apply at this time. This permit renewal does not affect this status.

VII. Facility Wide Air Toxics

The facility is subject to both modeled emission rates for styrene per 15A NCAC 2D .1100 and a TPER demonstration for five other NC air toxics (n-hexane, hexane isomers except n-hexane, methyl ethyl ketone, toluene, and xylene) per 15A NCAC 2Q .0711. This permit renewal does not affect this status.

However as part of this permit renewal, the permit has been modified to add permitting language indicating that the facility is in compliance with the requirements to demonstrate compliance with NC air toxics by the same deadline to comply with the last MACT known to apply to the facility per 15A NCAC 2Q .0705. As noted above, the facility is subject to 40 CFR 63, Subpart VVVV (Boat Manufacturing). This MACT is the only one applicable to the facility. Michael Brandon wrote in his first time Title V permit application review (**January 20, 2006 – 0881T04**):

*“The facility modeled for styrene impacts using a single source emission point for facility wide emissions...The AQAB reviewed and concurred with the modeling analysis in a memorandum dated **November 18, 2005**...This is a facility wide assessment based on potential product that satisfies the last MACT assessment requirements of 15A NCAC 2Q .0705.”*

Therefore, the following language has been added to the permit as part of this permit renewal:

State-enforceable only

22. 15A NCAC 2Q .0705: EXISTING FACILITIES AND SIC CALLS

- a. *As of the **November 3, 2005** submittal, emissions of toxic air pollutants have been demonstrated on a facility-wide bases (excluding those sources exempt under 15A NCAC 2Q .0702 “Exemptions”), that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPERs) listed in 15A NCAC 2Q .0711 “Emission Rates Requiring a Permit”, or the TAPs are in compliance with 15A NCAC 2D .1100 “Control of Toxic Air Pollutants” as described in Section 2.1 A.21 above.*
- b. *The facility shall be operated and maintained in such a manner that any new, existing, or increased actual emissions of any TAP listed in 15A NCAC 2Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 2Q .0702 “Exemptions”), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TPER listed in 15A NCAC 2Q .0711 without first obtaining an air permit to construct or operate.*
- c. *Prior to exceeding any of the TPERs listed in 15A NCAC 2Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 “Control of Toxic Air Pollutants”.*
- d. *The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 2Q .0711.*

VIII. Facility Emissions Review

The following table represents the latest years’ emission inventories from the facility:

Pollutant(s)	2007 Actual Emissions (tpy)	2008 Actual Emissions (tpy)
VOC	31.58	25.94
Total HAPs/TAPs	23.26	14.37

IX. Stipulation Review

The facility was last inspected by Will Wike of the RRO on **February 24, 2010**. He noted “at the time of the inspection, HC Composites LLC’s Tarboro facility appeared to be in compliance with all permitting requirements.” The inspection report detailed the past eight years of enforcement history.

X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States or Local Programs within 50 miles of the facility.

XI. Conclusions, Comments, and Recommendations

A professional engineer’s seal was not required for this renewal.

A consistency determination was not required for this renewal.

RRO recommends issuance of the permit and **was presented** with a DRAFT permit prior to notice and issuance.

RCO concurs with RRO’s recommendation to issue the renewed air permit.