| NORTH CAROLINA DIVISION OF AIR QUALITY | | | | | | Region: Raleigh Regional Office County: Edgecombe NC Facility ID: 3300170 | | |
|--|-----------------------------------|--|------------------------------|--|--|--|---|--------------------|
| Application Review | | | | | | Inspector's Name: John Dabinett | | |
| Issue Date: | Date needed | | | | | Compliance Code: 5 / In Physical Compliance | | |
| Facility Da | ita | | | | | Permit Applicability (this application | | |
| Applicant (F | facility's Nam | e): HC Compos | sites LLC | | | on | ly) | |
| Facility Address:HC Composites LLC1090 West Saint James StreetTarboro, NC27886 | | | | | SIP: 15A NCAC 02D .0515, .0521, .1806 NSPS: NA NESHAP: MACT VVVV PSD: NA PSD Avoidance: NA | | | |
| SIC: 3732 / 1 NAICS: 33 | Boat Building . 6612 / Boat Bu | And Repairing iilding | A. 64 T. '41 | 17 | | NC 112 Otl | C Toxics: NA C(r): NA her: NA | |
| Facility Clas Fee Classific | sification: Be | tore: Title V : Title V | After: Title After: Title | e V e V | | | | |
| Contact Data | | | | | | Ар | plication Data | l |
| Facility Co | ontact | Authorized Contact | | Technical Contact | | Application Number: 3300170 244 | | |
| Scott Ellis Head of Manufacturing Engineer (252) 641-8000 1090 West Saint James Street Tarboro, NC 27886 | | Scott Ellis Head of Manufacturing Engineer (252) 641-8000 1090 West Saint James Street Tarboro, NC 27886 | | Paul Zawila, P.E. Senior Environmental Engineer (803) 366-1086 5228 Norway Lane Rock Hill, SC 29732 | | Application Number:3500170.24ADate Received:06/14/2024Application Type:RenewalApplication Schedule:TV-RenewalExisting Permit DataExisting Permit Number:08819/T07Existing Permit Issue Date:01/07/2020Existing Permit Expiration Date:12/31/2024 | | |
| Total Actu | al emissions ir | n TONS/YEAR | : | | | [| Γ | |
| СҮ | SO2 | NOX | VOC | СО | PM10 | | Total HAP | Largest HAP |
| 2022 | | | 46.76 | | | | 41.00 | 36.73 [Styrene] |
| 2021 | | | 39.60 | | | | 38.73 | 36.47 [Styrene] |
| 2020 | | | 37.80 | | | | 28.55 | 25.24 [Styrene] |
| 2019 | | | 55.74 | | | | 41.35 | 37.10 [Styrene] |
| 2018 | | | 29.29 | | | | 23.92 22.68 [Styrene] | |
| Review Engineer:Jacob LarsonReview Engineer's Signature:Date: | | | | Comments / Recommendations: Issue: 08819/T08 Permit Issue Date: Date needed Permit Expiration Date: Date needed | | | | |

1. Purpose of Application

HC Composites LLC (HC) currently holds Title V Permit No. 08819T07 with an expiration date December 31, 2024 for a boat manufacturing facility in Tarboro, Edgecombe County, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on June 14, 2024, or at least six 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.

2. Facility Description

Boat molds are used to form the hull and deck of the boat. The inside of the hull is made of resin and fiberglass, and the outside is made of gel coat. There are four distinct processes involved in boat manufacturing: 1) lay up a spray, 2) sanding and fitting, 3) rigging and assembly, and 4) cleanup and shipping. Only the lay-up and spray operations generate air emissions of styrene and VOCs and, therefore, require air permitting. The process begins with coating the molds with a Teflon wax. The molds are then spray-coated with a gel coat. These processes are applied during the night shift. After overnight curing, the day shift will apply the remaining processes. Next, chopper guns cut polyester fibers to one-inch lengths and mix it with styrene-based resin and the mixture "chop" is sprayed to form fiberglass. Several layers of chop and woven fiberglass matting (e.g., roving) are alternated according to the boat specifications. The resin can also be applied manually, especially for the added matting. The facility uses a "state of the art" ventilation system that significantly reduces indoor air styrene concentrations as compared to the more typical wall ventilation fans used by smaller boat manufacturers. The Frees Company, a leading manufacturer of air handling equipment, designed and manufactured the ventilation system.

The facility is a Title V facility because emissions of hazardous air pollutants (HAPs) exceed 10 tons per year of any one HAP or 25 tons per year of all HAPs combined. HC exceeds both these standards.

3. History/Background/Application Chronology

History/Background

| February 25, 2015 | TV permit renewal issued. Air Permit No. 08819T07 was issued on January 07, 2024 with an expiration date of December 31, 2024. |
|-------------------|--|
| June 25, 2021 | Facility received Notice of Violation / Notice of Recommendation of Enforcement (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved July 01, 2021. |
| January 28, 2022 | Facility received (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved on March 01, 2022. |
| July 21, 2022 | Facility received (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved on August 09, 2022. |

Application Chronology

| June 14, 2024 | DEQ received permit application 3300170.24A for Title V renewal. |
|-----------------|---|
| July 10, 2024 | Sent acknowledgment letter indicating that the application for permit renewal was complete. |
| July 10, 2024 | Requested information regarding the operating hours of the facility. Information received same day via email from Scott Ellis. |
| July 22, 2024 | Draft permit and review forwarded for comments to Permitting Supervisor. Comments received from Joseph Voelker, Permitting Supervisor on August 15, 2024. |
| August 19, 2024 | Draft permit and review forwarded to the Stationary Compliance Branch for comments. No comments were received August 21, 2024. |
| August 19, 2024 | Draft permit and review forwarded to the Raleigh Regional Office for comments. No comments were received August 20, 2024. |
| August 19, 2024 | Draft permit forwarded to the applicant for comments. No comments were received August 20, 2024. |
| August 26, 2024 | Draft permit and review forwarded for comments to Permitting Supervisor. Comments received from Joseph Voelker, Permitting Supervisor on August 27, 2024. |
| August 27, 2024 | Requested information from facility to confirm minor technical details regarding emissions source description for IST-1 and operational details regarding MACT VVVV (See section 6 for MACT VVVV). Scott Ellis confirmed the information via email August 28, 2024. |
| XXXX xx, 2024 | Draft permit and permit review forwarded to public notice. |
| XXXX xx, 2024 | Public comment period ends comments received. |
| XXXX xx, 2024 | EPA comment period ends comments received. |
| XXXX xx, 2024 | Permit issued. |

4. Permit Modifications/Changes and TVEE Discussion

Table of Changes

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

| Page No. | Section | Description of Changes |
|----------|----------------------------------|--|
| | Cover page and throughout permit | • Updated all dates and permit revision numbers. |
| 3 | Cover letter | • Added "Notice Regarding The Right To Contest A Division Of Air Quality Permit Decision" page |
| 2 | Table of Contents | Added Section 2.2 as "Multiple Emission sources" Added Section 3.0 as "Insignificant Activities List" Added Section 4.0 as "General Permit Conditions" |
| 3 | List of Acronyms | Added "List of Acronyms" |
| 7-15 | 2.2 A.1 | Moved MACT VVVV from Section 2.1 A.3 to Section 2.2 A.1 Added specific rule references throughout Removed existing Section 2.2. A.1.b "Startup, Shutdown and Malfunction Provision" [15A NCAC 02D .1109 112(j) Case-by-Case MACT]. The rule was updated March 20, 2020 to address SSM, making this condition obsolete. Section 2.2 A.1.b added Definitions and Nomenclature Section 2.2 A.1.c added General Provisions Section 2.2 A.1.j added Implementation plan for open molding operations [40 CFR 63.5707] Revised/clarified regulatory refences throughout the permit condition. Section 2.2 A.1.w updated MACT VVVV electronic reporting requirements per September 2020 rule revision |
| 16 | 2.2 A.2 | • Moved odorous emission condition (02D .1806) to Section 2.2 |
| 17 | Section 3 | Added Insignificant Activities as Section 3 of the Title V Permit Changed description of IST-1 from "styrene storage tank" to "resin storage tank" per inspector report |
| 18-25 | Section 4 | Added General Conditions as Section 4 of the Title V Permit Updated General Conditions to version 8.0, 07/10/2024 from Version 7.0, 08/21/2023) |

Title V Equipment Editor Changes (TVEE)

The following TVEE changes will be made as a result of this renewal.

• Changed description of IST-1 from "styrene storage tank" to "resin storage tank" per inspector report and confirmed with facility August 28, 2024 via email.

5. Regulatory Review

HC Composites is subject to the following regulations. Per the facility inspection conducted by John Dabinett on March 26, 2024, the facility's equipment has not changed since the last renewal in 2020. The permit was updated to reflect the most current conditions for all applicable regulations, where necessary.

• <u>15A NCAC 02D .0515</u>, Particulates from Miscellaneous Industrial Processes – This regulation establishes an allowable emission rate for particulate matter (PM) from any stack, vent, or outlet resulting from any industrial process for which no other emission control standards are applicable. The regulation applies to Total Suspended Particulate (TSP) or PM less than 100 micrometers

(µm). The allowable emission rate is calculated using the following equation:

| $E = 4.10 \text{ x} (P)^{0.67}$ | (for process rates less than or equal to 30 tons per hour), or |
|------------------------------------|--|
| $E = 55.0 \text{ x P}^{0.11} - 40$ | (for process rates greater than 30 tons per hour) |

Where: E = allowable emission rate in pounds per hour (lb/hr) P = process weight rate tons per hour (tph)

The facility vents a small amount of PM emissions from the laminating process. The PM emissions were reviewed during the T06 permit by Betty Gatano March 03, 2015 and indicated only 0.5 tpy of PM emissions. Minimal particulate matter (PM) emissions will result from the laminating operations. No Monitoring, Recordkeeping, and Recording (MRR) is necessary. The most recent inspection conducted by John Dabinett of the Raleigh regional office on March 26, 2024 indicated compliance with this condition. Continued compliance is anticipated.

<u>15A NCAC 02D .0521, Control of Visible Emissions</u> – Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. This regulation limits visible emissions to no more than 20 percent opacity when averaged over a sixminute period. However, six-minute averaging periods may exceed 20 percent not more than once in an hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

The current permit requires no monitoring, recordkeeping, reporting with respect to this rule, as minimal visible emissions are expected for these sources. The most recent inspection conducted by John Dabinett of the Raleigh regional office on March 26, 2024 confirmed that there were no visual emissions during normal operations. Hence, no revisions are necessary to the existing monitoring, recordkeeping, reporting requirements with respect to this rule. Continued compliance is anticipated.

- <u>15A NCAC 02D .1111, Maximum Achievable Control Technology (MACT</u>) HC is subject to "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing", 40 CFR Part 63 Subpart VVVV. More discussion on MACT is provided below in Section 6.
- <u>15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions</u> This regulation is state enforceable only. The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. The most recent inspection conducted by John Dabinett of the Raleigh regional office on March 26, 2024 indicated that there were no objectionable odors beyond the facilities boundaries. Continued compliance is anticipated.

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

<u>NSPS</u>

The facility is not currently subject to any New Source Performance Standards. This permit renewal does not change the facility's NSPS status.

NESHAP/MACT

15A NCAC 02D .1111: MACT 40 CFR 63, Subpart VVVV

The Permittee shall limit organic HAP emissions from open molding operations based on the 12month rolling average calculated by Equation 1 of the permit; this value shall be recorded for each rolling 12-month period. In order to determine compliance with this limit, the Permittee shall either demonstrate that emissions from the open molding resin and gel coat operations by using model point value averaging to determine that HAP emissions are below the calculated limit or by using resins and gel coats that meet the HAP content requirements in Table 2 of MACT VVVV. Facility is currently using the model point value averaging option to determine compliance.

All resin and gel coat mixing containers with a capacity greater than or equal to 208 liters shall be always covered without visible gaps. These containers shall be visually inspected monthly, and records of each inspection and repairs/correcting actions shall be kept on-site. The Permittee shall use a cleaning solvent that contains no more than 5% organic HAP by weight for routine resin/gel coating cleaning operations. Organic HAP-containing cleaning solvents shall also be kept covered without visible gaps.

The Permittee shall keep a record of a copy of each notification/report submitted for this subpart, the total amounts used per month of each open molding material and the weighted-average organic HAP content for each operation. The Permittee shall also record the amounts of each resin applied by atomized and non-atomized methods. All records shall be kept for 5 years – the most recent 2 years of records need to remain on-site, and the older 3 years of records can remain off-site. The implementation plan shall also remain on-site. A semi-annual report shall be submitted no later than 60 days after each reporting period. The Permittee may switch between compliance methods for determining the rolling 12-month HAP emissions.

Changes to Subpart VVVV per 03/20/2020 revision see 85 FR 15971 (March 20, 2020), require electronic reporting to EPA's Compliance and Emissions Data Reporting Interface (CEDRI). Revision 85 FR 15973 (March 20, 2020) removed limitations for startup, shutdown, and malfunction (SSM) from the definition of "deviation". As a result of this change, only sources with add-on controls have SSM requirements CFR 63.5725, which does not apply to this facility. The March 2020 revision addressed SSM, making permit condition for Startup, Shutdown and Malfunction Provision [15A NCAC 02D .1109 112(j) Case-by-Case MACT] obsolete. Scott Ellis confirmed via email August 28, 2024 that no Aluminum coatings or solvents as defined by 40 CFR 63.5752 and 63.5749 are used in the facility. Therefore, recordkeeping/monitoring requirements in section 2.1 A.3.hh.iv and v of the current permit have been removed. The permit conditions have been modified to include these changes. The permit was also revised to clarify the Permitee's compliance requirements under the rule. No changes in intent were made. See the Table of Changes in Section 4 for changes made to the existing permit condition. The most recent inspection conducted by John Dabinett of the Raleigh regional office on March 26, 2024 indicated that there were no deviations from MACT VVVV requirements. Continued compliance is anticipated.

PSD

The facility is considered a minor source under PSD, with potential VOC emissions of less than 250 tons per year. This permit renewal does not affect the PSD status of the facility.

<u>112(r)</u>

40 CFR Part 68 requires stationary sources that hold more than threshold quantities of regulated substances to develop a risk management plan (RMP), in accordance with Section 112(r) of the Clean Air Act. The RMP identifies the potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures if an accident occurs.

This facility is not subject to the Risk Management Program requirements since 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

The CAM rule (40 CFR 64; 15A NCAC 02D .0614) applies to each pollutant specific emissions unit (PSEU) at major TV facilities that meets all three following criteria:

- the unit is subject to any (non-exempt: e.g. pre November 15, 1990, Section 111 or Section 112 standard) emission limitation or standard for the applicable regulated pollutant.
- the unit uses any control device to achieve compliance with any such emission limitation or standard.
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source (i.e., 100 tons per year for criteria pollutants or 10/25 tons per year for HAPs).

CAM does not apply to the HC composite facility, because it does not have emission control devices. This permit renewal does not affect that status.

7. 15A NCAC 02D .1100 and 02Q .0700

The facility modeled for styrene impacts using a single source emission point for facility wide emissions on November 18, 2005. The hourly impact from the worst-case facility wide emission estimate of 19 pounds per hour was less than 0.5 milligrams per cubic meter (1-hour period). The Acceptable Ambient Level is 10.6 milligrams per cubic meter (1-hour standard). The AQAB review and concurred with the modeling analysis in a memorandum dated November 18, 2005. Permit conditions for 2D .1100 and 2Q .0711 were added to Air Permit No. 08819T04 (the initial TV permit) issued on January 20, 2006.

During the permit renewal T06 March 03, 2015 conditions 2D .1100 and 2Q .0711 were removed. All sources of TAPs from HC Composites are subject to MACT standards. North Carolina G.S. 143-215.107(a) exempts emission sources subject to MACT standards from NC air toxics regulations provided their emissions do not "present an unacceptable risk to human health," in accordance with G.S. 143-215. 107(b). As part of the T06 permit renewal and at the request of the facility, the DAQ conducted an evaluation to demonstrate that actual emissions from these sources do not pose an unacceptable risk to human health. Maximum emissions of TAPs from 2009-2013 as reported in DAQ's emission inventory are provided in the table below. As shown in the table, the emissions were much less than the TPERs or modeled emission limit, as in the case of styrene. Therefore, the emission sources of TAPs presented no unacceptable risk to human health and references to 2D .1100 and 2Q .0711 were removed from the permit under the T06 renewal.

| | Maximum Actual Emissions | | | TPER | | | |
|--------------------------------------|-----------------------------|----------|---------|--------------------------------|----------------------------------|---|-------------------------------|
| Pollutant | (lb/yr) | (lb/day) | (lb/hr) | Carcinogens (lb/yr) | Chronic Toxicants (lb/day) | Acute Systemic Toxicants (lb/hr) | Acute Irritants (lb/hr) |
| n-hexane | | | | | 23 | | |
| Hexane isomers except n-hexane | | | | | - | | 92 |
| Methyl ethyl ketone | 111 | 2.6 | 0.11 | | 78 | | 22.4 |
| Toluene | 34 | 0.78 | 0.033 | | 98 | | 14.4 |
| Xylene | | | | | 57 | | 16.7 |
| Pollutant | Maximum Actual Emissions | | | Modeled Emission Limit (lb/hr) | | | |
| | (lb/yr) | (lb/day) | (lb/hr) | 10.0 | | | |
| Styrene | 10,197 | 235 | 9.8 | 19.0 | | | |

• The only TAPs reported in DAQ's emission inventory during the period of 2009 -2013 were MEK, toluene, and styrene.

• The maximum emissions during the period of 2009 – 2013 occurred in 2009.

• Hourly emissions were determined by dividing the annual emissions in 2009 by 1,040

hours of operation as reported in the Emissions Data module of IBEAM.

The emission inventory report for calendar year 2023 submitted June 27, 2024 indicated styrene emissions of 76,367 pounds per year. This significant increase from 10,197 that the previous unacceptable risk evaluation was conducted in 2015, has triggered a toxics review for this renewal.

Head of Manufacturing Scott Ellis stated in email on July 10, 2024 that the facility operates approximately 2900 hours a year that can produce styrene emissions. Dividing 76,367 pounds per year of styrene by 2900 hours a year operating time gives 26.3 pounds per hour of styrene emissions (28% increase). Exceeding the previous modeled emission limit of 19.0 pounds per hour. However, the T04 permit issued January 01, 2006 states that the 19.0 pounds per hour was only 0.5 milligrams per cubic meter (1-hour period) or 5% of the AAL. The acceptable ambient level is 10.6 milligrams per cubic meter. Therefore, the 28% increase of styrene emissions is not expected to come close to the acceptable ambient level of 10.6 milligrams per cubic meter, indicating that there is no unacceptable risk to human health.

There will be no changes with respect to 15A NCAC 02D .1100 or 02Q .0700 applicability as a result of this renewal. Continued compliance is anticipated.

8. Facility Emissions Review

The facility-wide potential emissions do not change under this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the years 2018 through 2022 are provided in the header of this permit review.

9. Compliance Status

DAQ has reviewed the compliance status of HC Composites. During the most recent inspection, conducted on March 26, 2024 by John Dabinett of RRO, the facility appeared to be in compliance with all applicable requirements. The facility has had the following air quality violations in the last five years:

| June 25, 2021 | Facility received Notice of Violation / Notice of Recommendation of Enforcement (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved July 01, 2021. |
|------------------|--|
| January 28, 2022 | Facility received (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved on March 01, 2022. |
| July 21, 2022 | Facility received (NOV/NRE) for late submittal of MACT VVVV semiannual report. NOV/NRE was resolved on August 09, 2022. |

The facility's Annual Compliance Certification was received on January 29, 2024 and indicated compliance with all applicable requirements in 2023.

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

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 02Q .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 02Q .0521 above. No affected states or local agencies are within 50 miles of this facility.

11. Other Regulatory Considerations

- A P.E. seal is NOT required for this renewal application.
- A zoning consistency determination is NOT required for this renewal application.
- A permit fee is NOT required for this renewal application.
- EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in

light of prior court decisions¹. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses² and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance. Hence General Condition J will be removed from the revised permit.

12. Recommendations

The permit renewal application for HC Composites LLC. located in Tarboro, Edgecombe County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 08819T08.

¹ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

² In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Sources:

Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).