NORTH CAROLINA DIVISION OF
AIR QUALITY

Application Review

Issue Date: February 07, 2025

Region: Washington Regional Office
County: Pitt
NC Facility ID: 7400104
Inspector's Name: Robert Bright
Date of Last Inspection: 09/30/2024
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Grady-White Boats, Inc.

Facility Address:
Grady-White Boats, Inc.
5121 MLK Jr. Highway
Greenville, NC 27834

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

Permit Applicability (this application only)

SIP: 02D .0515, .0521, .1111, .1806
NSPS: NA
NESHAP: MACT VVVV
PSD: No
PSD Avoidance: Yes, existing condition
NC Toxics: NA
112(r):
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Dustin Hollis Safety Engineer (252) 752-2111 PO Box 1527 Greenville, NC 27835	Dustin Hollis Safety Engineer (252) 752-2111 PO Box 1527 Greenville, NC 27835	Dustin Hollis Safety Engineer (252) 752-2111 PO Box 1527 Greenville, NC 27835

Application Data

Application Number: 7400104.24A
Date Received: 06/06/2024
Application Type: Modification
Application Schedule: TV-Minor
Existing Permit Data
Existing Permit Number: 05630/T14
Existing Permit Issue Date: 09/29/2020
Existing Permit Expiration Date: 08/31/2025

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2023	0.6000	7.31	95.15	1.68	3.06	95.21	90.61 [Styrene]
2022	1.44	8.56	70.98	1.97	3.33	67.23	57.98 [Styrene]
2021	1.20	7.11	64.81	1.63	3.10	61.67	54.68 [Styrene]
2020	1.46	8.64	58.35	1.98	2.90	55.45	49.74 [Styrene]
2019	1.25	7.41	56.91	1.69	2.80	54.35	48.82 [Styrene]

Review Engineer: Joseph Voelker

Review Engineer's Signature: Date: 02/07/2025

Joseph Voelker

Comments / Recommendations:
Issue 05630/T15
Permit Issue Date: 02/07/2025
Permit Expiration Date: 08/31/2025

I. Introduction and Purpose of Application

Grady-White Boats (Grady-White or GW) operates a sport fishing boat manufacturing facility in Greenville, North Carolina. Grady-White's principal sources of regulated air pollutant emissions include a main manufacturing building (ES-1) and two diesel-fired, peak shaving generators (ES-2 and ES-3). The main manufacturing building includes gel coat spraying, resin spraying, resin injection, painting, sanding/grinding, and assembly.

As stated in the cover letter of the application:

"… this application seeks to add two new dry filter bays associated with relocating small parts manufacturing operations within the laminating, gel coat, and assembly permitted emission source ES-1. This modification will increase the number of permitted dry filter bays from three to five. No increase in emissions is expected from these changes."

GW requested the application be processed as a minor modification pursuant to 15A NCAC 02Q .0515.

II. Chronology

Date	Description
06/06/2024	Application was received and assigned Application No. 7400104.24A
06/17/2024	Permittee (GW) requested the application to be placed on HOLD to evaluate if the application was going to be revised to include new peak shaving engine.
06/20/2024	Email from GW received stating to proceed with processing the application as submitted.
06/20/2024	Email from Robert Bright of the regional office was received confirmed that Dustin Hollis is indeed the Responsible Official.
06/20/2024	Email from Dustin Hollis (responsible official) was received stating to proceed with processing the minor modification..
06/26/2024	An acknowledgment letter was sent to GW via email stating the application was complete as of June 20, 2024, and that GW may implement the proposed change(s) as a minor modification under 15A NCAC 02Q .0515.
06/26/2024	ADD INFO email sent requesting the following information: 1. Revised B form – since we are effectively permitting the whole building as a single source (i.e., ES-1) please revise the form to reflect all of the operations (except generators as they are permitted as separate emission sources) 2. C forms for each new filter bay 3. A spreadsheet with any of the supporting calculations (if available)
01/03/2025	Information requested on 06/26/2024 was received via email. Also included a 02D .0515 applicability/compliance analysis based on pre-control device emission estimates.
01/13/2025	Draft sent to GW
01/31/2025	Final comments received from GW

III. Modification Description

GW is requesting to add two new dry filter bays ID No. CD-6 (small parts lamination) and ID No. CD-7 (small parts injection molding) to the operations included in building no. 1. Building no. 1 is the location of the assembly, gel coating and assembly operations; essentially all the boat building operations and sources of emissions with the exception of the peak shaving generators.

This application will serve to modify ES-1 in the current Title V air permit to include the two new dry filter bays, ID No. CD-6 for small parts lamination and ID No. CD-7, for small parts injection molding.

Building No. 1 appears in Section 1 of the permit as follows:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1 **MACT VVVV**	Building No. 1 (laminating, gel coating, and assembly)	CD-1; CD-2; CD-3	Three dry filter bays (552 square feet of filter area, 552 square feet of filter area, and 112 square feet of filter area, respectively)

The source will appear in Section 1 of the revised permit as follows:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1 **MACT VVVV**	Building No. 1 (laminating, gel coating, and assembly)	CD-1 CD-2 CD-3 CD-6 CD-7	Dry filter bay (552 square feet of filter area) Dry filter bay (552 square feet of filter area) Dry filter bay (224 square feet of filter area) Small parts dry filter bay (360 square feet of filter area) Light RTM dry filter bay (200 square feet of filter area)

Relevant History to the Application request

The following narrative was excerpted from the Section 1 of the application. A review of DAQ records shows the content to be correct.

> Grady-White submitted a Regulatory Applicability Determination Request (RADR) to the Nort Carolina Division of Air Quality (DAQ) dated September 27, 2022, seeking air permitting guidance for the planned relocation of small parts lamination operations within ES-1. The change involved moving small parts lamination to a dedicated area on the west end of ID No. ES-1 including the construction of new air handling units (AHU), dry fiberglass filters, and exhaust stacks. In response, the DAQ requested Grady-White provide an update to the refined air dispersion modeling analysis for styrene emissions also requiring the inclusion of styrene emissions from the nearby World Cat facility. The results of the revised analysis showed that the combined styrene maximum ground-level concentration from both facilities was below the Acceptable Ambient Level (AAL) for styrene at 15A NCAC 02D .1100. Additionally, Grady-White's contribution was a very small percentage of the combined impact from both facilities. The modification was granted the authority to proceed.
>
> Grady-White submitted another RADR, dated January 15, 2024, for a similar modification planned for the small parts infusion molding operation. The change involved relocating small parts infusion to a dedicated area on the north side of ES-1, including a new AHU, dry fiberglass filters, and exhaust stack. To expedite the review process, Grady-White accompanied this RADR with another update to the previously revised styrene air dispersion modeling analysis. This latest revision the analysis presented nearly identical results as the previous revision submitted for review.
>
> It should be noted that Grady-White does not consider either modification as an expansion to existing operations. The changes are necessary to improve manufacturing logistics an efficiency within the building. Any differences in emissions as a result are expected to be small and possibly a reduction in overall emissions. Following completion of the improvements, some open molding spraying within ES-1 will be outsourced and, previously outsourced injection molding, will be brought back into the ES-1 operation.
>
> The DAQ responded to Grady-White's January 15, 2024, RADR, in a letter dated May 10, 2024, requiring submittal of a 15A NCAC 2Q .0515 Title V Minor Permit Modification application to add the new small parts lamination and small parts injection modeling dry filter bays to the air permit.

Hence this application was submitted to satisfy the DAQ response letter dated May 10, 2024. No emission changes, other than their redistribution with respect to location, are expected with this modification.

IV. Regulatory Review

15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES
This rule applies to stacks, vents, or outlets emitting particulates from industrial processes with no other applicable standards. The allowable emission rate is in terms of pounds per hour and is calculated using the following equations:

For process rates up to 30 tons per hour: $E = 4.10(P)^{0.67}$
For process rates greater than 30 tons per hour: $E = 55.0(P)^{0.11} - 40$

Where: E = Allowable emission rate in pounds per hour
P = Process weight in tons per hour

GW provided a detailed 02D .0515 analysis on January 3, 2025, for each of the proposed operations. It is reproduced below:

TABLE 2.
Grady-White Boats - New Small Parts and Light RTM Filter Booth Particulate Matter Emissions

Basis		
Operating Hours	4,000	hours
2023 Resin/GC Usage Facility-Wide	3,084,466	lb/yr
Max. Yr. (2005) Boat Production	1905	boats/yr
2023 Boat Production	1302	boats/yr
Boat Production Ratio	1.46	

Small Parts Filter Booth PM Emissions		
Resin/Gel Coat Material Throughput		
Small Parts Resin/GC Usage Allocation	16	%
Max. Small Parts Resin/GC Usage (ratio)	722,078	lb/yr
Max. Small Parts Resin/GC Usage	0.090	ton/hr
Fiberglass Material Throughput		
Small Parts Fiberglass Throughput (2023)	144,301	lb/yr
Max. Small Parts Fiberglass Throughput (ratio)	211,132	lb/yr
Max. Small Parts Fiberglass Throughput	0.026	ton/hr
Mold Material Throughput		
Small Parts Mold Throughput	18,900	lb/hr
Small Parts Mold Throughput	9.45	ton/hr
Total Process Rate (P)	9.57	ton/hr
Small Parts 2D .0515 PM Emissin Rate (E)[Note 1]	18.6	lb PM/hr
PM Emissions		
Max. Resin/GC Usage	722,078	lb/yr
Percent PM As Overspray[Note 2]	1	%
Small Parts Available PM, Uncontrolled	7220.78	lb PM/yr
Small Parts Available PM, Uncontrolled	1.81	lb PM/hr
Uncontrolled Emissions Less Than PM Allowable?	Yes	
Filter Eff. (86.3%)/80% Cap. Eff.[Note 3]	20	%
Controlled Small Parts PM Emissions	1444.2	lb PM/yr
Controlled Small Parts PM Emissions	0.4	lb PM/hr
Controlled Small Parts PM Emissions	0.72	ton PM/yr

Light RTM Filter Booth PM		
Gel Coat Material Throughput		
Max. GC Light RTM Allocation	5152.5	lb/yr
Max. GC Light RTM Allocation	0.001	ton/hr
Mold Material Throughput		
Light RTM Mold Throughput	150	lb/hr
Light RTM Mold Throughput	0.075	ton/hr
Total Process Rate (P)	0.08	ton/hr
Light RTM 2D .0515 PM Emissin Rate (E)[Note 1]	0.7	lb PM/hr
PM Emissions		
Max. GC Light RTM Usage	5152.5	lb/yr
Percent PM As Overspray[Note 2]	1	%
Light RTM Available PM, Uncontrolled	51.53	lb PM/yr
Light RTM Available PM, Uncontrolled	0.013	lb PM/hr
Uncontrolled Emissions Less Than PM Allowable?	Yes	
Filter Eff. (86.3%)/80% Cap. Eff.[Note 3]	20	%
Controlled Small Parts PM Emissions	10.3	lb PM/yr
Controlled Small Parts PM Emissions	0.00258	lb PM/hr
Controlled Small Parts PM Emissions	0.0052	ton PM/yr

Notes:
1. 15A NCAC 2D .0515: E = 4.10(P)$^{0.67}$ for process rates less than 30 ton/hr, where E = the allowable particulate matter emission rate (lb/hr) and P = the process rate (tons/hr)
2. 1% over spray assumed in Actual AEI reports.
3. Factor used in annual Actual AEI reports as discussed with Steve Carr (WRO, June 2004)

Note that for both operations the uncontrolled emissions are expected to be well below the 02D .0515 allowable emission rate. As such the new filter bays are not relied upon to demonstrate compliance with this rule. The calculations and assumptions used appear to be reasonable for these type of boat manufacturing operations.

The existing permit requires the typical "inspections and maintenance as recommended by the manufacturer" and the associated recordkeeping and reporting which is consistent with current DAQ permitting policy. This monitoring, recordkeeping and reporting will be extended to cover the new filter bays. Continued compliance with this rule is expected.

15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS
This regulation applies to fuel burning operations and industrial processes where visible emissions (VE) can be reasonably expected to occur.

As these dry filter bays will be "manufactured" after July 1, 1971, the visible emissions (VE)from these sources shall not be more than 20 percent opacity when averaged over a six-minute period except for the following exceptions:

Six-minute averaging periods may exceed 20 percent opacity if:
(1) no six-minute period exceeds 87 percent opacity;
(2) no more than one six-minute period exceeds 20 percent opacity in any hour; and
(3) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

With respect to this rule, the existing permit requires the following of the existing dry filter systems:

- Visible emissions from the building to be controlled by a dry filter system.
- To ensure compliance with this rule, the Permittee shall perform the monitoring, recordkeeping and reporting specified in the 02D .0515 condition (See discussion above)

Given the type and magnitude of PM emissions expected (i.e. little to none), little to no VE emissions are expected which appears to be typical for boat manufacturing operations. For sources with this expected level of VE, the "typical" monitoring, that is consistent with current DAQ permitting policy (i.e. permit shell language (would require the following:

- To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal.
- The Permittee shall establish "normal" for these sources in the first 30 days following the beginning of their operation.
- If visible emissions from these sources are observed to be above normal, the Permittee shall either:
  i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
  ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2610 (Method 9) for 12 minutes is below the limit given in 02D 0521.

Given the discussion above, the "typical" monitoring is justified. However, the monitoring for the existing filter bays is streamlined to the monitoring recordkeeping and reporting required to demonstrate compliance with 02D .0515. As it is unclear what is the exact basis for the current monitoring requirement, the monitoring for the existing filter bays will remain unchanged and will be reassessed at the next permit renewal.

However, the typical monitoring consistent with current DAQ permitting policy for the new filter bays will be imposed. The frequency of the observations will be monthly. Associated recordkeeping and reporting will be required. Compliance with this rule is expected.

State Enforceable Only

15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

This rule requires that 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.

GW does not expect odors from these operations to cause or contribute to objectionable odors beyond the facility's boundary. Continued compliance with this rule is expected.

15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

GW is subject to the following facility-wide emission limitation at Section 2.2 A.1 of the current permit.

In order to avoid applicability of this regulation, facility-wide emissions of volatile organic compounds (VOC) shall be less than 250 tons per consecutive 12-month period.

As discussed in Section III above, the proposed modification is not expected to result in an increase in emissions. The current permit requires monitoring, recordkeeping and reporting sufficient to ensure that facility-wide VOC emissions are below the 250 tpy threshold. Note the maximum VOC emissions over the previous 5 years were approximately 71 tpy.

No changes are necessary to the existing permit condition. Continued compliance is expected.

15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
40 CFR Part 63, Subpart VVVV, "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing

AS GW operates a boat manufacturing facility that builds fiberglass boats and is a major source of HAP, it is subject to this rule pursuant to 40 CFR 63.5683(a). Based on the last semiannual report received July 23, 2024, GW complies with the MACT via the "Compliant Materials Option" as allowed pursuant to 40 CFR 63.5701(b). The original rule became effective August 22, 2001. However, it has been revised/amended since then as follows:

10/03/2001 – Federal Register Correction –
No substantive changes that are not reflected in the current permit

03/20/2020 - Final Risk and Technology Review Amendments -
The changes to the rule made at this time can be summarized as follows (See Federal Register, 85 FR 15971):

- final action addressing emissions during periods of startup, shutdown, and malfunction (SSM)
- amending provisions regarding electronic reporting of performance test and performance evaluation results and semiannual reports.

These final amendments include removal of regulatory language that is inconsistent with the requirement that the standards apply at all times, inclusion of language requiring electronic reporting of performance test and performance evaluation results and semiannual reports. The numeric emission limits of the standards remain unchanged.

11/1/2021 – Minor Technical Corrections
The changes to the rule made at this time can be summarized as follows (See the Federal Register ,86 FR 66041):

> Table 8 of the March 20, 2020, final rule (85 FR 15960) included specific references to the general provisions of 40 CFR part 63, subpart A. After promulgation, the EPA found that Table 8 indicates that 40 CFR 63.6(f) applies to the rule, but, in fact, section 63.6(f)(1) includes start-up, shutdown, and malfunction (SSM) language that has been vacated by the D.C. Circuit and the EPA stated in the preamble the Agency intended to remove from the Boat Manufacturing NESHAP (85 FR at 15963 and 15967-68). In this action, the EPA is revising Table 8 to indicate §63.6(f)(1) does not apply. A red line version of the corrected rule language is available in Docket ID No. EPA-HQ-OAR-2016-0447. The correction to the reference in Table 8 only corrects the reference to subpart A and does not change the requirement to comply with emission limits of the rule at all times, as addressed in the proposed and final rule preamble. These corrections will ensure that the regulatory text agrees with the description of the rule that was provided in the final rule preamble.

A review of the existing permit condition revealed that the permit was not up to date with the requirements of the existing rule. As a result, the existing permit condition was substantially revised. The major changes include:

- Removed existing condition b, "Startup, Shutdown and Malfunction Provision [15A NCAC 02D .1109 112(j) Case-by-Case MACT]. MACT VVVV was updated March 20, 2020, to address SSM, making this condition obsolete.
- At condition b added the following condition:
  For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.5779 shall apply.
- At condition c added the following condition:
  The Permittee shall comply with the requirements of the General Provisions in 40 CFR 63, Subpart A, as specified in Table 8 to 40 CFR 63 Subpart VVVV. [40 CFR 63.5773]
- Since the existing permit condition ostensibly allows for the "MACT model point value averaging (emissions averaging) option" the Permit must contain all applicable requirements under that option. The permit was revised to include the missing requirements. The missing requirements added include:
  Implementation plan for open molding operations requirement pursuant to 40 CFR 63.5707 that use the emissions averaging option
  Compliance requirements for the emissions averaging option pursuant to 40 CFR 63.5710
- The condition in general was substantially revised to be consistent with other VVVV permit conditions at other facilities with similar compliance options.

In short, the permit condition was revised to be consistent with the current rule. However, since GW is currently using the "compliant materials option" it is unlikely that these changes will result in any compliance issues. Continued compliance is expected.

General Conditions Discussion
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 decisions[1]. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses[2] 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.

The DAQ has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500) nor other state regulations. Hence, no changes to its Title V or other state regulations are necessary. Instead, DAQ had chosen to include them directly in individual Title V permits as General Condition J. Therefore, as discussed above, the DAQ is required to promptly remove such impermissible provisions, from individual Title V permits, after August 21, 2023, through the normal course of permit issuance. General Condition J will therefore be removed from the revised permit.

V. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM, and Toxics

NSPS
The modification does not affect any sources with applicable NSPS standards.

NESHAP/MACT
The dry filter bays are being added to building No. 1 which is considered the emission source (ID No. ES-1). The boat manufacturing operations are subject to 40 CFR Part 63, Subpart VVVV "National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing." See discussion in Section IV above.

PSD
Pitt County is in attainment or unclassifiable for all promulgated National Ambient Air Quality standards (NAAQS) in accordance with 40 CFR 81.334.

For major stationary sources located in areas designated as attainment with respect to a specific regulated criteria pollutant, the requirements of the PSD program (40 CFR Part 51.166, as incorporated into 15A NCAC 02D .0530) apply. Major stationary sources are those sources with a potential to emit (as defined at 40 CFR 51.166(b)(4)) of a regulated New Source Review (NSR) pollutant of either: 100 tons per year or more if the source is listed in 51.166(b)(1)(i)(a); or 250 tons per year or more otherwise. The subject facility is not one of the stationary sources listed under 51.166(b)(1)(i)(a) and is therefore in the "250 ton" source category.

Since the permit contains facility-wide PSD avoidance limits of 250 tpy each for NOx and VOC, and its PTE for all other regulated NSR pollutants are below PSD major source thresholds, the facility is considered a "minor" stationary source under PSD. As discussed in Section IV above, the proposed modification does not trigger a PSD review and hence is not a major modification.

Pitt County has triggered increment tracking under PSD for NO_x. However, this permit modification does not consume or expand increments for this pollutant.

112r - Risk Management Program (RMP) (15A NCAC 2D .2100)
The Permittee is not subject to Section 112(r) of the Clean Air Act requirements because it does not store nor handle any of the regulated substances in quantities above the thresholds in 40 CFR 68.130.

CAM
02D .0614 implements the federal rule "Compliance Assurance Monitoring" (CAM) at 40 CFR Part 64. The CAM rule requires owners and operators at a facility with a Title V permit to conduct monitoring to provide a reasonable assurance of compliance

[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 Major 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).

with applicable requirements. Monitoring focuses on emissions units that rely on pollution control device equipment to achieve compliance with applicable standards. Applicability is addressed at 02D .0614(a), which states:

> (a) General Applicability. Except as set forth in Paragraph (b) of this Rule, the requirements of this Paragraph shall apply to a pollutant-specific emissions unit at a facility required to obtain a permit pursuant to 15A NCAC 02Q .0500 if the unit:
> (1) is subject to an emission limitation or standard for the applicable regulated air pollutant, or a surrogate thereof, other than an emission limitation or standard that is exempt pursuant to Subparagraph (b)(1) of this Rule;
> (2) uses a control device to achieve compliance with any such emission limitation or standard; and
> (3) 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. For purposes of this Subparagraph, "potential pre-control device emissions" means the same as "potential to emit" as defined in 15A NCAC 02Q .0103, except that emission reductions achieved by the applicable control device shall not be taken into account.

Note that a pollutant-specific emissions unit (PSEU) is defined in at 40 CFR 64.1 as an emissions unit considered separately with respect to each regulated air pollutant. Also note that TAPs regulated solely under 15A NCAC 02D .1100 are not considered regulated air pollutants as defined at 40 CFR 64.1 and hence not subject to CAM.

The current modification only addresses the PSEU Building No.1 (ID No. ES-1). Building No.1 has a potential to emit (PTE) of VOC greater than 100 tpy. It does not utilize any control devices for VOC. For all other applicable regulated pollutants, its pre-controlled PTE is less than 100 tpy. Thus, it emits less than the amount, in tons per year, required for the source (PSEU) to be classified as a major source. Hence CAM does not apply to Building No. 1.

TOXICS (15A NCAC 02Q .0700 and 02D .1100)
The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the toxic air pollutant permitting emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

The proposed modification is not expected to result in an increase in toxic air pollutants as regulated under 15A NCAC 02D.1100 or 02Q .0700. However, the addition of new exhaust points could be cause for concern with respect to the actual ambient impacts of the TAPs.

All sources of TAPs are subject to a MACT (i.e., MACT ZZZZ or MACT VVVV) and therefore meet the exemption set forth in 15A NCAC 02Q .0702(a)(27). As such, a permit is not required pursuant to 15A NCAC 02Q .0700 for the sources of TAPs at GW.

However, pursuant to 15 A NCAC 02Q .0706(d), sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S. 143-215.107(a)(5)b. Thus, a determination needs to be made, if the operation of the facility after the modifications will pose an "unacceptable risk to human health."

As discussed in Section III above, the facility submitted for review a dispersion analysis for the TAP of concern styrene on January 16, 2024. It was reviewed by the DAQ Stationary Source Compliance Branch (SSCB). The SSCB issued a memo on March 27, 2024, stating: The modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled.

The following table is excerpted from the memo:

Table 1. Maximum Impacts
Grady-White Boats, Inc., Greenville, Pitt County, North Carolina

Pollutant	Averaging Period	Max. Conc. ($\mu g/m^3$)	AAL ($\mu g/m^3$)	% of AAL
Styrene	1-hour	10,139.6	10,600	95.7%

It should be noted that this demonstration included off-site sources (i.e., the nearby World Cat facility, another boat manufacturing facility). A review of the styrene emissions modeled shows that the styrene emissions from GW were approximately 47 pounds per

hour and 100 pounds per hour from World Cat. Based on a review of the previous 5 years emission inventory data the GW generally assumes 6000 hours per year operation.

Calendar year 2022 had the highest emissions of styrene from GW:115,965 pounds per year or, assuming 6000 hours of operation, approximately 19 pounds per hour on average. Assuming World Cat emissions were of the magnitude includes in the model, GW emitted about 41% of the emissions that would be expected to approach the acceptable ambient level (AAL) for styrene.

A review of World Cat's emission inventory shows 30,427 pounds per year and 2000 hours per year operation. This equates to approximately 15 pounds per hour of styrene on average. This is only 15% of the emission rate included in the modeling demonstration.

In summary, although the modeling demonstration shows a small margin of compliance with the styrene AAL, the emission rates modeled were much more conservative than those being seen in practice. Thus, it is reasonable to conclude that no unacceptable risk to human health results from GW remaining exempt from having a permit to emit TAPS pursuant to 15A NCAC 02Q .0700.

VI. Compliance History

As stated in the most recent compliance inspection report conducted by Robert Bright of the Washington Regional Office on September 30, 2024:

> Based on visual observations and records review, the facility appeared to operate in compliance with all applicable air quality regulations and permit conditions at the time of inspection.

The five-year violation history as included in the inspection report is as follows:

Five Year Violation History:

Date	Letter Type	Rule Violated	Violation Resolution Date
01/29/2024	NOV	Part 63 - NESHAP/MACT Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines	01/29/2024
11/07/2022	NOV	Part 63 - NESHAP/MACT Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines	11/07/2022
08/23/2022	NOV	Part 63 - NESHAP/MACT Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines	08/23/2022
02/17/2022	NOV	Part 63 - NESHAP/MACT Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines	02/17/2022
12/09/2021	NOV	Part 63 - NESHAP/MACT Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines	12/09/2021

VII. Changes Implemented in Revised Permit

The following changes were made to Air Permit No. 05630T14:*

Page No.	Section	Description of Changes
Cover Letter	N/A	• Updated cover letter with application number, permit numbers, and dates. • Added minor modification language
1	Permit page 1	• Revised permit number, replaces permit number, effective date, application number, issuance date of permit.
3	NA	• Moved the "List of Acronyms" from after the permit as an "Attachment" to page 3 of the permit
4	1	• Added reference to the new dry filter bays (ID Nos. CD-6 and CD-7) • Corrected the descriptor for ID No. CD-3. No physical changes were made. From:Dry filter bay (122 square feet of filter area) To: Dry filter bay (224 square feet of filter area)
5	2.1 A	• Added reference to the new dry filter bays (ID Nos. CD-6 and CD-7)
5	2.1 A.1	02D .0515 condition • Added reference to the new dry filter bays (ID Nos. CD-6 and CD-7) • No substantive changes were made

Page No.	Section	Description of Changes
6	2.1 A.2	02D .0521 condition • Added reference to the new dry filter bays (ID Nos. CD-6 and CD-7) • No substantive changes were made to the existing monitoring recordkeeping and reporting requirements to the existing dry filter bays • Monitoring, recordkeeping and reporting requirements consistent with current DAQ permitting policy were added for the new dry filter bays (ID Nos. CD-6 and CD-7). This includes establishing a "normal" visible emissions for each filter bay within 30 days of beginning operation.
8	2.1 B.3.	02D .1111 Condition • At section 2.1 B.3.o.ii., the language was corrected as follows: "The Permittee shall measure the pressure drop across the catalyst once per month and demonstrate that the pressure drop across the catalyst is within the operating limitation established during the performance test per ~~condition m~~. **Section 2.1 B.3.n"**
15	2.2 B.1	MACT VVVV condition • Removed existing condition 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. • At condition b added the following condition: For the purposes of this permit condition, the definitions and nomenclature contained in 40 CFR 63.5779 shall apply. • At condition c added the following condition: The Permittee shall comply with the requirements of the General Provisions in 40 CFR 63, Subpart A, as specified in Table 8 to 40 CFR 63 Subpart VVVV. [40 CFR 63.5773] • Since the permit condition allowed for the "MACT model point value averaging (emissions averaging) option," the Permit must contain all applicable requirements under that option. The permit was revised to include the missing requirements. The missing requirements added include: - Implementation plan for open molding operations requirement pursuant to 40 CFR 63.5707 that use the emissions averaging option - Compliance requirements for the emissions averaging option pursuant to 40 CFR 63.5710 • The condition in general was substantially revised to be consistent with other VVVV permit conditions at other facilities with similar compliance options. No changes in intent were made.
24	3	Insignificant Activities List • This Section is new. • This list was formerly an "Attachment" • Revised the bulk resin tank capacities at the request of the Permittee as follows: From: IS-1: Bulk resin tank (5,650 gallon capacity) IS-2: Bulk resin tank (5,650 gallon capacity) To: IS-1: Bulk resin tank (6,000 gallon capacity) IS-2: Bulk resin tank (6,000 gallon capacity) Revised descriptor for IS-5 to: "Paint Spray Booth No. 2." No physical changes were made.
25	4	• This was formerly Section 3 of the permit. • Revised GENERAL CONDITIONS from version 5.5, 08/25/2020 to version 8.0, 07/10/2024. Changes include the removal of General Condition J. See permit review.

* This list is not intended to be a detailed record of every change made to the permit but a summary of those changes.

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

The application is being processed pursuant to the minor modification procedures at 15A NCAC 02Q .0515. As such no public notice or EPA review procedures apply.

IX. PE Seal

Pursuant to 15A NCAC 02Q .0112 "Application requiring a Professional Engineering Seal," specifically 02Q .0112(a), a professional engineer's seal (PE Seal) is required to seal technical portions of air permit applications for new sources and modifications of existing sources as defined in 15A NCAC 02Q .0103 that involve:

(1) design;
(2) determination of applicability and appropriateness; or
(3) determination and interpretation of performance of air pollution capture and control systems.

Upon review, the dry filter bays (ID Nos. CD-6 and CD-7) are not necessary to ensure compliance with any applicable standards. See 02D .0515 discussion above. As such, this application does not involve the three criteria above and hence no PE Seal is required.

X. Zoning

A zoning consistency determination is required pursuant to 15A NCAC 02Q .0304(b) if the air permit application involves a new facility or the expansion of an existing facility. The determination was included with the application received on June 6, 2024. The determination, signed by Chantae Gooby, the Chief Planner of the City of Greenville, states: "the proposed operation is consistent with applicable zoning ordinances."

XI. Recommendations

This permit application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

The Washington Regional Office has received a copy of this draft permit and had no comments.

This engineer recommends issuance of the revised permit (Permit No. 05630T15).