

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Washington Regional Office
County: Greene
NC Facility ID: 4000041
Inspector's Name: Yongcheng Chen
Date of Last Inspection: 11/21/2022
Compliance Code: 5 / In Physical Compliance

Facility Data	Permit Applicability (this application only)
<p>Applicant (Facility's Name): Moore's Fiberglass, Inc.</p> <p>Facility Address: Moore's Fiberglass, Inc. 403 North Wilson Street Walstonburg, NC 27888</p> <p>SIC: 3089 / Plastics Products, Nec NAICS: 326199 / All Other Plastics Product Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p>SIP: 15A NCAC 02D .0515, 15A NCAC 02D .0521, 15A NCAC 02D .1111, 15A NCAC 02D .1806 NSPS: N/A NESHAP: 40 CFR Part 63, Subpart WWWW PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other:</p>

Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 4000041.22A Date Received: 10/28/2022 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 09913/T04 Existing Permit Issue Date: 05/17/2018 Existing Permit Expiration Date: 04/30/2023</p>
<p>Chris Moore Operations Manager (252) 753-2583 403 North Wilson Street Walstonburg, NC 27888</p>	<p>Hardy Moore, Jr. President (252) 753-2583 403 North Wilson Street Walstonburg, NC 27888</p>	<p>Hardy Moore, Jr. President (252) 753-2583 403 North Wilson Street Walstonburg, NC 27888</p>	

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	---	---	13.76	---	---	13.65	13.65 [Styrene]
2020	---	---	12.58	---	---	12.47	12.47 [Styrene]
2019	---	---	12.09	---	---	12.00	12.00 [Styrene]
2018	---	---	13.40	---	---	13.17	13.17 [Styrene]
2017	---	---	12.20	---	---	12.12	12.12 [Styrene]

<p>Review Engineer: Alice Wessner</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 09913/T05 Permit Issue Date: _____ Permit Expiration Date: _____</p>
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1. Purpose of Application

Moore's Fiberglass, Inc. currently holds Title V Permit No. 09913T04 with an expiration date of April 30, 2023, for a fiberglass manufacturing facility located in Walstonburg, Greene, North Carolina. This permit application is for a permit renewal without modification. The renewal application was received on October 28, 2022, 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

This facility mainly manufactures fiberglass boat parts (Grady-White contract) and other fiberglass products such as, but not limited to, tanks and covers for large facilities such as PCS and Weyerhaeuser and smaller jobs to fill in production. From the most recent inspection by Yongcheng Chen of the Washington Regional Office on November 21, 2022, *the facility is comprised of three buildings, the main building where most operations take place, a secondary building in the back where only closed molding takes place and a new third building that is used to make the "Hard Tops" for the Grady White boats. This process was previously performed in main building and was modeled to ensure that emissions were below the limits. They are able to produce 3 to 4 tops per day.*

The facility is a Title V facility because emissions of styrene exceed 10 tons per year. The potential to emit (PTE) of styrene is 52.56 tons per year. Actual emissions for 2021 is 13.65 tons per year.

Expected Styrene emissions due to increased production utilizing a maximum allowable emissions rate of 12.0 pounds per hour (lb/hr) for styrene are:

- Potential to emit (PTE)

$$12 \text{ lbs/hr} * 8,760 \text{ hrs/yr} * 1 \text{ ton}/2000 \text{ lbs} = 52.56 \text{ tons/yr}$$

- Actual expected emissions

$$12 \text{ lbs/hr} * 2,000 \text{ hrs/yr} * 1 \text{ ton}/2000 \text{ lbs} = 12 \text{ tons per year (tpy)}$$

Thus, Styrene emissions greater than 10 tons per year (tpy) of any one individual HAP triggering this facility to become a Major Title V facility as defined in 15A NCAC 02Q:

Pictures of facility below from most recent inspection November 2022



3. History/Background/Application Chronology

History/Background

May 17, 2018	Air Permit No. 09913T04 was issued on May 17, 2018 for the initial Title V Permit and Renewal with an expiration date of April 30, 2023.
August 24, 2018	AQAB Memorandum detailing the modeled rate for styrene of 13 pounds per hour as a result of receiving a request from the Permittee to move part of their existing operations to a new building.
September 7, 2018	Applicability Determination Request No. 3277. The Permittee requested to know if moving operations from an old building to a new building with more efficient stacks would require changes to the permit. Moving the equipment would not require a permit modification, however, if the Permittee would want the newly modeled limit of styrene of 13 pounds per hour to be put into the permit that would require a permit modification. To date, DAQ has not received a request to have this changed in their permit.

Application Chronology

October 28, 2022	Received permit application 4000041.22A for renewal.
November 15, 2022	Sent acknowledgment letter indicating that the application for permit renewal was complete.
January 13, 2023	Draft permit and review forwarded Booker Pullen, Supervisor for comments.
January 17, 2023	Comments received from supervisor. Edits incorporated.
January 18, 2023	Draft permit and review forwarded to SSCB and Washington Regional Office for comments.
January 24, 2023	Samir Parekh of the SSCB replied via email that he had no comments.
January 25, 2023	Washington Regional Office reviewer indicated via email/phone call that they had no comments on the draft permit or permit review.
January 25, 2023	Draft permit forward to Permittee
February 28, 2023	Permittee indicated via email/phone that they had no comments on the draft permit other than the Authorized Affiliate needed to be changed from Hardy Moore, Jr to Chris Moore. The Permittee was emailed and told to submit a letter on company letterhead with the updated information for new authorized affiliate.
March 1, 2023	Draft permit and permit review forwarded to public notice via DAQ website.
XXX XX, 2023	Public comment period ends. Comments were/were not received.
XXX XX, 2023	EPA comment period ends. Comments were/were not received.
XXX XX, 2023	Permit issued.

4. Permit Modifications/Changes and TVEE Discussion

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

The following changes were made to Air Permit No. 09913T04:*

Page No.	Section	Description of Changes
Cover letter and throughout permit	--	<ul style="list-style-type: none"> Updated all dates and permit revision numbers. Reformatted permit in accordance with current TV permitting shell.
3	--	“List of Acronyms” moved to Page 3 of the permit.
4	2.1 A Table	Deleted references to Toxic Air Pollutants 15A NCAC 02D .1104 and 15A NCAC 02Q .0711 from Table 2.1 A Changed reference to Hazardous Air Pollutants from Section 2.2 to Section 2.1 Changed reference to Odors from Section 2.2 to Section 2.1
6	2.2 A Table	Deleted State-enforceable only Toxic Air Pollutants 15A NCAC 02D .1104 and 15A NCAC 02Q .0711 references Moved references to Hazardous Air Pollutants and Odors to Section 2.1 A Table
6-10	2.2 A 1	Moved 15A NCAC 02D .1111, 40 CFR 60, Subpart WWWW to Section 2.1 A.3
10	2.2 A.2	Deleted Section
10-11	2.2 A.3	Deleted Section
10	Footnote 3	Deleted footnote 3. No longer applicable.
11	2.2 A.4	Moved Condition to 2.1 A.4
12	Section 3	Moved “List of Insignificant Activities” to Section 3 in accordance with the updated formatting for TV permits.
12 – 23	Section 4	Updated General Permit Conditions with most current version (version 6.0, 01/07/2022).

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

This permit renewal is being processed without modification, and no changes to the Title V Equipment Editor are needed.

5. Regulatory Review

Moore’s Fiberglass, Inc. is subject to the following regulations. The facility’s equipment and operations have not changed since the last renewal in 2018.

- 15A NCAC 02D .0515 “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0521 “Control of Visible Emissions”
- 15A NCAC 02D .1111 – 40 CFR 63, Subpart WWWW “National Emission Standards for Hazardous Air Pollutants for Reinforced Plastics Composite Production”
- 15A NCAC 02D .1806 “Control and Prohibition of Odorous Emissions”

The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary. 15A NCAC 02D .1100 and 15A 02Q .0705 will be removed from the permit as discussed in Section 7 ‘Facility Wide Air Toxics’ below.

15A NCAC 2D.0515 PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

The allowable emission rates for particulate matter from any stack, vent, or outlet, resulting from any industrial process for which no other emission control standards are applicable, shall not exceed the level calculated with the equation $E = 4.10(P)^{0.67}$ calculated for process rates less than or equal to 30 tons per hour. For process rates greater than 30 tons per hour, the allowable emission rates for particulate matter shall not exceed the level calculated with the equation $E = 55.0(P)^{0.11} - 40$. For these equations "E" equals the maximum allowable emission rate for particulate matter in pounds per hour and "P" equals the process rate in tons per hour.

Process rate means the total weight of all materials introduced into any specific process that may cause any emission of particulate matter. Solid fuels charged are considered as part of the process weight, but liquid and gaseous fuels and combustion air are not. For a cyclical or batch operation, the process rate is derived by dividing the total process weight by the number of hours in one complete operation from the beginning of any given process to the completion thereof, excluding any time during which the equipment is idle. For a continuous operation, the process rate is derived by dividing the process weight for a typical period of time by the number of hours in that typical period of time.

From the initial Title V application submittal received September 19, 2017:

The potential PM emissions before controls and limitations are 1.3 tons per year. The particulates from overspray of guns spraying resin and gel coat at 502,000 pounds per hour maximum estimated uncontrolled PM is 1.4 pounds per hour before filters.

$P = 502,000 \text{ pounds per hour} * 1 \text{ ton}/2000 \text{ pounds} = 251 \text{ tons per hour}; > 30$ therefore use the following equation:

$$E = 55.0(P)^{0.11} - 40$$

$$E = 61.0 \text{ pounds per hour}$$

From the application submittal, PM is 1.4 pounds per hour before filters and PM and PM₁₀ emissions from all applications are 1.31 tons per year and 0.65 tons per year, respectively; thus, compliance is expected.

No reporting is required for particulate emissions from source ID No. ES-1.

15A NCAC 02D.0521 CONTROL OF VISIBLE EMISSIONS

Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. For sources manufactured after July 1, 1971, VEs shall not be more than 20 percent opacity when averaged over a six-minute period.

The following equipment was manufactured after July 1, 1971 and must not have VE of more than 20 percent opacity when averaged over a six-minute period, except as specified in 15A NCAC 02D .0521(d).

Gel coat and resin operations (ID No. ES-1) for small parts consisting of:

- Four Gel coat resin lamination lines (ID Nos. F1 through F4)
- Two Closed mold operations (ID Nos. FC5 and FC6)
- Trim operations of closed mold operations (ID No. TO)
- Hand layup operations (ID No. HLU)
- Miscellaneous cutting and grinding operations (ID No. CG)
- Mold cleaning and preparation process (ID No. MCP)
- Resin transfer molding (ID No. SL-RTM2)

According to past inspection reports, opacity at this facility, due to good maintenance practices, site policies and processes, continued compliance for visible emissions is expected. Visible emissions from this facility are controlled by filtering systems in each area of production. The filters are inspected and changed when needed. In the woodworking areas of the facility dust collectors are used. No monitoring, reporting or record keeping requirements are included in this condition.

15A NCAC 02D.1111, Maximum Achievable Control Technology (MACT)

Moore's Fiberglass, Inc. is subject to National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Production. More discussion on MACT is provided below in Section 6.

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

The facility shall implement management practices or install/operate odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. According to the most recent inspection, conducted on November 21, 2022, no odors were detected beyond the facilities

boundary and a search of the IBEAM database indicates no complaints regarding odorous emissions have been received since the last inspection. Continued compliance is expected.

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

NSPS

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

Moore's Fiberglass, Inc. is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastic Composites Production, 40 CFR Part 63 Subpart WWWW "Reinforced Plastic Composites Production" (40 CFR 63, Subpart WWWW) because they own or operate a reinforced plastic composites production facility that is located at a major source of HAP emissions. According to 40 CFR 63.5785(a) reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic composites. The resins and gel coats may also contain materials designed to enhance the chemical, physical, and/or thermal properties of the product. Reinforced plastic composites production also includes cleaning, mixing, HAP-containing materials storage, and repair operations associated with the production of plastic composites. 40 CFR 63.5780 covers open molding, closed molding mixing, and equipment cleaning operations, continuous compliance with the HAPs emission standards as well as storage of HAP-containing materials. This MACT specifically regulates organic HAPs in the form of styrene from these facilities.

However, Moore's Fiberglass, Inc. is not subject to the NESHAP for Boat Manufacturing Subpart VVVV because it does not meet the criteria in 40 CFR 63.5683(a).

63.5683 Does this subpart apply to me?

(a) This subpart applies to you if you meet both of the criteria listed in paragraphs (a)(1) and (2) of this section.

(1) You are the owner or operator of a boat manufacturing facility that builds fiberglass boats or aluminum recreational boats.

(2) Your boat manufacturing facility is a major source of HAP either in and of itself, or because it is collocated with other sources of HAP, such that all sources combined constitute a major source.

63.5787 What if I also manufacture fiberglass boats or boat parts?

(a) If your source meets the applicability criteria in 63.5785, and is not subject to the Boat Manufacturing NESHAP 40 CFR 63, Subpart VVVV, you are subject to this subpart regardless of the final use of the parts you manufacture.

Per 40 CFR 63.5683 and 40 CFR 63.5787(a) above, Subpart VVVV does NOT apply to Moore Fiberglass, only Subpart WWWW.

The subpart also establishes requirements to demonstrate continuous compliance with the hazardous air pollutants (HAP) emission standards. The rule covers open molding, closed molding, mixing, and equipment cleaning operations, as well as the storage of HAP-containing materials. This MACT specifically regulates organic HAPs in the form of styrene from these facilities.

- Emission Limits [40 CFR 63.5795(a), 63.5805(c), 63.5810, Table 3]
- Work Practice Standards [40 CFR 63.5805(c), 63.5835, 63.5900(a)(4), and Table 4]
- Recordkeeping [40 CFR 63.5895(c) and (d), 63.5915(c) and (d), 63.5920]
- Reporting [40 CFR 63.5895(d), 63.5910, and Table 14]

Moore's Fiberglass is required to demonstrate emission limitations by running their emission calculations month and to follow the appropriate work practice standards, mainly to keep HAP-containing materials in closed containers unless being used. They will need to keep all records, SDS sheets, shipment records/receipts for materials bought/used, calculations, correspondence, etc. for at least five years. In addition, they must send in a semi-annual deviation report

specifically for Subpart WWWW due to WaRO by January 31st and July 31st every year. If there were no deviations, a letter must still be sent stating there were no deviations. According to the most recent inspection November 2022, the facility appeared to be following the appropriate work practices. During the inspection, the Permittee had all their necessary records. They had their product usage figures in a spreadsheet on their computer and had a back-up hard copy in a manila folder. Their data was being updated monthly in the appropriate manner. Part of compliance is keeping records going back at least five years. Compliance is indicated.

PSD

The facility does not fall into one of the 28 PSD named categories that are limited to 100 tons per year; therefore, they are limited to 250 tons of VOCs per year. VOC potential emissions are 52.56 tons per year (please refer to Section 4 above) and PM potential emissions are 1.40 lb/hr before controls or particulate filters; or less than 5 tons per year potentials (based on Form D4 of the application submittal of Application 4000041.12A). Therefore, the facility will continue to be minor for PSD purposes.

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 112(r) thresholds. No change with respect to 112(r) is anticipated under this permit renewal.

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).

Moore’s Fiberglass, Inc. currently utilizes dry filters over exhaust fans in the areas where there are open and closed molding operations. There is no permit requirement for the filters but the Permittee indicated that they are replaced periodically to keep the fans from getting out of balance from resin build up. The woodworking shop uses a dust collection system. Because the filters are considered inherent, the facility does not emit PM in quantities greater than the major source threshold. Therefore, CAM does not apply. This permit renewal does not change the facility’s CAM status.

7. Facility Wide Air Toxics

In Moore’s Fiberglass, Inc. renewal application cover letter, it was requested that because the facility is subject and complies with 40 CFR Part 63, Subpart WWWW that State Enforceable Conditions 2.2 A.2 and 3 be removed from Permit No. 09913T04. 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 codified on May 1, 2014. As part of this permit renewal, the DAQ conducted a TAP evaluation and demonstrated emission sources of TAPs present no unacceptable risk to human health. The conditions referencing 15A NCAC 02D .1100 were removed from the permit under a prior TV permit renewal. The current permit renewal does not change the facility’s status with respect to NC Air Toxics.

Pollutant	Average Period	Maximum allowable emission (lb/hr)	Impact	AAL	1992	% of AAL
Styrene	1-hour	12.0	10034	10600	6276	94.6%¹

¹Memorandum dated November 9, 2012, to Randall Jones, Environmental Engineer I, Washington Regional Office from Charles Buckler, Meteorologist II, Air Quality Analysis Branch (AQAB). Emission rates were based on maximum equipment design capacity and AP-42 emission factors for all combustion sources. Maximum allowable emissions (lb/hr) of styrene during a 1 hour averaging period resulted in a maximum allowable emissions rate of 12.0 lb/hr at 94.6 % of the Acceptable Ambient Levels; thus, no new modeling is necessary.

Pollutant	Average Period	2013 (µg/m ³)	2014 (µg/m ³)	2015 (µg/m ³)	2016 (µg/m ³)	2017 (µg/m ³)	AAL (µg/m ³)	% of AAL
Styrene	1-hour	10196	8878	8935	8393	8416	10600	96% ²

²August 24, 2018 Alex Zamowski of the AQAB evaluated styrene in a modeling analysis which was conducted to determine the emissions increase and the new facility layout did not pose any unacceptable health risk to the public. This modeling analysis was performed because of an Applicability Determination #3277.

In addition to the removal of the facility-wide toxics conditions for styrene discussed above, the current permit condition for compliance with 15A NCAC 02Q .0705 is being removed because the rule was repealed effective May 1, 2014.

8. Facility Emissions Review

The facility-wide potential emissions have not changed because of this TV permit renewal. Actual emissions for criteria pollutants and HAPs for the previous five years reporting periods are provided in the header of this permit review.

Facility Total **CY 2021** Emission Summary Recorded in ED

Facility ID #: 4000041

Facility Name: Moore's Fiberglass, Inc.

Permit #(s): 09913T04

Green House Gases Pollutants (GHG)		Actual Emissions Tons/Yr			% Change
Pollutant	CAS			Demini- mus	
		Not Reported	Not Reported		N/A
CO2 equivalent (sum of individual GHG pollutant emission times their 1995 IPCC Global Warming Potential (GWP), converted to metric tons)		No GHGs Reported			
Criteria Pollutants		Actual Emissions (Tons/Year)			% Change
Pollutant	CAS	CY 2021 from ED	CY 2020 from Fees	Demini- mus	
VOC	VOC	13.76	12.58	0.5	9.4%
Hazardous Air Pollutants (HAPs) and/or Toxic Air Pollutants (TAPs)		Actual Emissions (Pounds/Year)			% Change
Pollutant	CAS	CY 2021 from ED	CY 2020 from Fees	Demini- mus	
MEK (methyl ethyl ketone, 2-butanone)	78-93-3	Not Reported	7.16	100.0	N/A
Methyl methacrylate	80-62-6	Not Reported	Not Reported	1,000.0	N/A
Styrene	100-42-5	27,303.00	24,943.00	100.0	9.5%
Largest Individual HAP	Styrene	27,303.00 lbs			
Total HAP Emissions		27,303.00 lbs			
Largest Individual CAP	VOC	13.76 tons			
Total CAP Emissions		13.76 tons			
Total TAP Emissions		27,303.00 lbs			
Total Aggregate Emissions		13.76 tons			

9. Compliance Status

DAQ has reviewed the compliance status of Moore's Fiberglass, Inc. During the most recent inspection, conducted on February 18, 2022, the facility appeared to be in compliance with all applicable requirements. However, the facility was issued a Notice of Violation and Recommendation for Enforcement (NOV/NRE) On August 20, 2018. The NOV/NRE was for violation of Permit No. 09913R03, specific condition A.9.d. – MACT Reporting Requirements. But, based on a closer review of the permit conditions, it was determined that the late report was submitted to comply with an out-of-date permit condition. The new permit, 09913RT04, contained a similar reporting requirement but there was apparently confusion in the transition from one permit to the next. Therefore, the violation was resolved. The facility's most recent Annual Compliance Certification was received on January 20, 2022 and indicated compliance with all applicable requirements in 2021. The facility's most recent semi-annual compliance report because of Rule 63.5912(d) in MACT WWWW was received August 3, 2022.

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 the permit application, the proposed permit and the 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.

12. Recommendations

The permit renewal application for Moore's Fiberglass, Inc. 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. 09913T05.