

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: March 13, 2025

Region: Washington Regional Office
County: Pitt
NC Facility ID: 7400021
Inspector's Name: Randall Jones
Date of Last Inspection: 09/16/2024
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): Avient Protective Materials LLC</p> <p>Facility Address: Avient Protective Materials LLC 5750 Greenville Boulevard NE Greenville, NC 27834</p> <p>SIC: 2824 / Organic Fibers, Noncellulosic NAICS: 325220 / Artificial and Synthetic Fibers and Filaments Manufacturing</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p style="text-align: center;">Permit Applicability (this application only)</p> <p>SIP: 02D .0515 and .0521 NSPS: VVV NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> <p>Myrna Pacheco SHE-Environmental Engineer (252) 406-5872 5750 Martin Luther King Jr. Highway Greenville, NC 27834+8928</p>	<p style="text-align: center;">Authorized Contact</p> <p>Scott McIntyre Site Director (252) 707-3535 5750 Martin Luther King Jr. Highway Greenville, NC 27834+8928</p>	<p style="text-align: center;">Technical Contact</p> <p>Myrna Pacheco SHE-Environmental Engineer (252) 406-5872 5750 Martin Luther King Jr. Highway Greenville, NC 27834+8928</p>	<p>Application Number: 7400021.24A Date Received: 10/15/2024 Application Type: Modification Application Schedule: TV-Minor Existing Permit Data Existing Permit Number: 05754/T102 Existing Permit Issue Date: 07/01/2024 Existing Permit Expiration Date: 06/30/2029</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2023	0.0700	9.29	66.56	8.04	3.18	2.40	1.34 [Toluene]
2022	0.0600	9.99	70.28	8.62	3.30	3.05	1.71 [Toluene]
2021	0.0600	9.31	57.24	8.09	3.14	3.19	2.41 [Toluene]
2020	0.0500	7.17	39.63	6.78	2.37	3.89	1.99 [Toluene]
2019	3.32	47.99	55.91	31.63	5.74	4.23	2.11 [Toluene]

<p>Review Engineer: Jacob Larson</p> <p>Review Engineer's Signature: <i>Jacob Larson</i> Date: March 13, 2025</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 05754/T103 Permit Issue Date: March 13, 2025 Permit Expiration Date: June 30, 2029</p>
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1. Purpose of Application

Avient Protective Materials LLC (Avient) currently owns and operates a non-woven fabric manufacturing facility in Greenville, Pitt County, North Carolina. Avient is currently operating under permit 05754T102 issued on July 01, 2024 and schedule to expire June 30, 2029. The facility is proposing to add a new process line to make coated fabrics. This application was submitted and meets the requirements for a minor modification to the Title V Permit No. 05754T102 in accordance with 15A NCAC 02Q .0515.

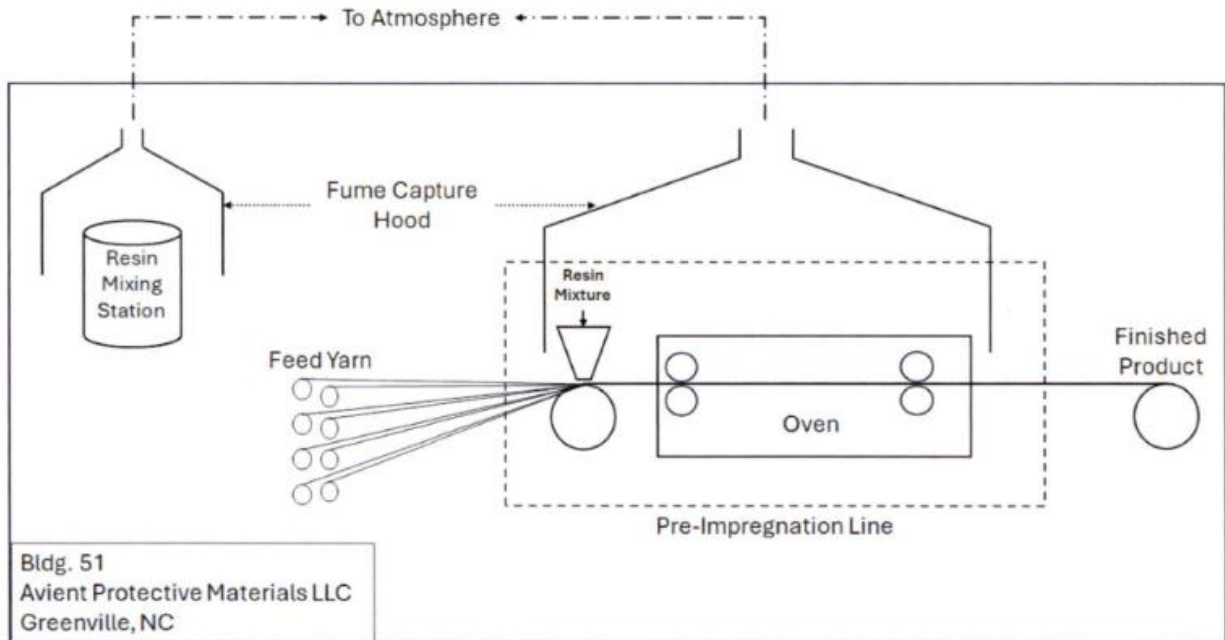
2. Modification Description

Avient is requesting the addition of a coated fabrics process line that will be housed in building 51 an existing structure at the facility. The Resin Mixing Station (ID No. RMS-1) will be used to combine the solvent and hardening resin to form the coating that will be applied to fabric at the Pre-Impregnation Line (ID No. PrePreg-1). Any VOC emissions from the Resin Mixing Station will be collected using “Nederman Fume Extraction Arms” and will be exhausted to the atmosphere outside of building 51. The resin mixture prepared at the resin mixing station will be poured into the feed hooper of the Pre-Impregnation Line. The resin will be applied to the fabric and the impregnated fabric will be drawn through an oven to cure. The oven is electrically hot water heated. The Pre-Impregnation Line will be equipped with a fume hood that will be emitted to atmosphere. The hardener that is used to create the resin is 25.5% ethyl acetate (CAS Number 141-78-6) and is defined as a VOC under 40 CFR Part 51.100(s). The solvent used in the resin mixture is acetone which is not classified as a VOC per 40 CFR Part 51.100(s)(1)

The following emission sources will be added to the permit:

(ID No. RMS-1) Resin Mixing Station

(ID No. PrePreg-1) Pre-Impregnation Line



3. Summary of Changes to Permit

Page No.	Section	Description of Changes
--	Cover page and throughout permit	<ul style="list-style-type: none">• Updated all dates and permit revision numbers.
4-6	Permitted Emissions Table	<ul style="list-style-type: none">• Added RMS-1 and PrePreg-1 to emission source table.
29	2.1 D	<ul style="list-style-type: none">• Added NCAC 02D .0515 condition for sources RMS-1 and PrePreg-1• Added NCAC 02D .0521 condition for sources RMS-1 and PrePreg-1• Added 40 CFR Part 60 subpart VVV condition for sources RMS-1 and PrePreg-1

4. History/Background/Application Chronology

History/Background

July 01, 2024 Air Permit No. 05754T102 was issued for renewal.

Application Chronology

October 15, 2024	DEQ received permit application 7400021.24A for Minor modification.
October 16, 2024	Application fee of \$ 3,508 was received via ePayment.
November 06, 2024	Completeness letter was signed by Mark Cuilla and sent to applicant.
November 27, 2024	Technical Additional information request. Change from state only modification to minor modification. Requested due date extension to January 30, 2025 due to holidays.
January 30, 2024	Received the requested information.
January 30, 2025	Applicant submitted a CBI request.
February 10, 2025	CBI approval letter draft forwarded to permitting supervisor.
February 04, 2025	Draft permit and review forwarded for comments to Permitting Supervisor.
February 20, 2025	Comments received from Joseph Voelker, Permitting Supervisor.
February 24, 2025	CBI approval letter was signed by Mark Cuilla permitting chief and sent to applicant.
February 25, 2025	Draft permit forwarded to the applicant for comments. No comments were received March 12, 2025.
February 25, 2025	Draft permit and review forwarded to the Stationary Compliance Branch for comments. no comments were received February 28, 2025.
February 25, 2025	Draft permit and review forwarded to the Mooresville Regional Office for comments. Minor comments received March 12, 2025.
March 13, 2025	Permit issued.

5. Regulatory Review

15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes

This rule applies to emission sources that exhaust through a stack and are not subject to another particulate matter (PM) emission limit. Emissions of particulate matter from these sources (ID No. RMS-1 and PrePreg-1) are uncontrolled. These sources shall not exceed the emission rate as calculated by the following equations:

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

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

RMS-1

PM emissions are expected to occur at the Resin Mixing Station (ID No. RMS-1) where liquid resins and solvents are mixed with dry powder pigments/dyes. The facilities production rate “P” in tons per hour as described in the formula above shall be recorded and made available to DAQ upon request. The facility estimates a maximum PM emission rate of 108.5 lbs per year or 0.012 lbs/hr. The facilities maximum through put for this source is 5.5 tons/yr or 6.3E-4 tons/hr. Using the above equation the facility is allowed to emit .029 lbs/hr. These values were confirmed with facility consultant Jack Martin via email on January 30, 2025. Given the large margin of compliance and the facility is not relying on any controls to comply with this rule, the facility will only be required to record the production rate “P” in tons per hour as described in the formula above and made available to DAQ upon request. Compliance with this rule is expected.

PrePreg-1

PM emissions are expected due to the combustion of VOCs in the electric oven associated with Pre-Impregnation Line 1 (ID No. PrePreg-1). PM emissions from the combusted VOCs are expected to be very low, much less than what is allowed by the equations above. Given the large margin of compliance the facility is only required to record the production rate “P” in tons per hour as described in the formula above and made available to DAQ upon request. 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 can be expected to occur. These sources will be “manufactured” after July 1, 1971, the visible emissions from these sources (ID Nos. RMS-1 and PrePreg-1) 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.

Visible Emissions from these sources are expected to be minimal (well under 20% opacity). The current permit requires monthly monitoring, recordkeeping and semiannual reporting for similar VOC emitting sources. Therefore, the following will be required for these two new sources:

To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish “normal” for these sources in the first 30 days of beginning operation. If visible emissions from these source 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 Section 2.1 D.2.a above.

Typical recordkeeping and semiannual reporting will also be required. Compliance with this rule is expected.

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

NSPS

40 CFR Part 60, Subpart VVV “ standards of Performance of Polymeric Coating of Supporting Substrates Facilities”

The new production line (ID Nos. RMS-1 and PrePreg-1) are considered “affected facilities” under this rule. 40 CFR 60.740(b) states that affected facilities that use less than 95 Megagrams (104.7 tons) of VOC are only subject to requirements CFR 60.744(b), 60.747(b) and 60.747(c). Those requirements are summarized below:

40 CFR 60.744(b)

The site will make semi-annual estimate of the projected annual amount of VOC to be used for the year. The site will maintain either records of actual VOC use.

40 CFR 60.747(b)

The site will submit written notification to the DAQ of anticipated startup of the process, a material flow chart indicating projected VOC use and submit records of actual VOC use at the end of the initial year.

40 CFR 60.747(c)

Maintain semiannual record of projected actual 12-month VOC use. Report the first semiannual estimate that exceeds the 95 Mg upper threshold and report the first 12-month period in which VOC use exceeds the 95 Mg upper threshold.

If the amount of VOC used is 95 Mg or greater per 12-month period, the facility is subject to all the requirements of this subpart. Once a facility has become subject to the requirements of this subpart, it will remain subject to those requirements regardless of changes in annual VOC use. As the permittee requested to only use less than 95 Megagrams per 12-month period the permit will contain an operating restriction as follows:

Operating restriction [15A NCAC 02Q .0508(b)]

- c. The amount of “VOC used” as defined in 40 CFR 60.741 in these sources shall be less than 95 Megagrams (104.7 tons) per consecutive 12-month period. [40 CFR 60.740(b)]

The rule requires pursuant to 40 CFR 60.747(b) the “notification of anticipated startup required under 40 CFR 60.7(a)(2) of the General Provisions.” However, 40 CFR 60.7(a)(2) is RESERVED and hence is not a valid reference. However, 40 CFR 60.7(a)(3) requires “notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.” Hence, the permit will include the notification of actual startup and a material flow chart indicating projected VOC use as follows:

Notifications [15A NCAC 02Q .0508(f)]

- d. The following notification requirements apply:
 - i. The Permittee shall submit a notification of the actual date of initial startup of these sources to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [40 CFR 60.7(a)(3)]
 - ii. The Permittee shall include with the notification required in paragraph i above a material flow chart indicating the projected VOC usage for the first 12-month period. [40 CFR 60.747(b)]The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524 if these notification requirements are not met.

Note that operating restriction in 40 CFR 60.740(b) is based on a 12-month period, not necessarily a calendar year. Also, note the rule requires the Permittee to make projections of its VOC usage twice per year. The rule is ambiguous on how to deal with affected sources that initially startup in a month that is not January or July, the traditional semiannual periods used for regulatory compliance. To add clarity and aid practical enforceability, the rule required monitoring and recordkeeping will be included in the TV permit as follows:

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. For these emission sources, the Permittee shall:
 - i. make semiannual estimates and maintain records of the projected annual usage of VOC. The first 12-month estimate shall include the month of initial startup of these sources. The second 12-month

- estimate shall start on January or July, whichever month is the earliest after the initial startup. All subsequent semiannual 12-month estimates shall begin January and July.
- ii. maintain records of the actual monthly and rolling 12-month total VOC usage.
[40 CFR 60.744(b) and (c)]
- The Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524 if these recordkeeping requirements are not met or indicate the operating restriction in Section 2.1 D.3 c above was exceeded.

Pursuant to 15A NCAC 02Q .0508(f):

- f) A permit shall contain monitoring and related recordkeeping and reporting requirements as specified in 40 CFR 70.6(a)(3) and 70.6(c)(1), including conditions requiring:
- (1) the permittee to submit reports of required monitoring no less frequent than every six months.
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Therefore, to incorporate the Subpart VVV reporting requirements and address TV requirements the reporting will be included in the permit as follows:

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a semiannual summary report of the monitoring and recordkeeping activities given in Sections 2.1 D.3.d above postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall include the following:
- i. actual monthly VOC usage for the previous 17 months;
- ii. rolling 12-month total VOC usage for each 12-month period over the previous 17 months;
- iii. if applicable:
- (A) the first semiannual estimate in which projected annual VOC use exceeds 95 Megagrams (104.7 tons).
- (B) the first 12-month period in which the actual VOC use exceeds 95 Megagrams (104.7 tons).
[40 CFR 60.747(c)]

In summary, the permit will include all the applicable requirements for the NSPS Subpart VVV affected sources and the appropriate monitoring recordkeeping and reporting requirements to ensure compliance with those applicable requirements. Compliance with this rule is expected.

NESHAP

The facility is considered an area source as it is subject to a HAP major avoidance condition at Section 2.2 B.1. The proposed modification will not result in the increase of any HAPs. No changes to NESHAP applicability are required as part of this modification.

PSD

The facility is currently classified as a major stationary source for the purpose of the Prevention of Significant Deterioration (PSD) permitting program. The permit contains:

- BACT limits for VOC for the sources permitted at Section 2.1 A and B.
- At Section 2.1 A.7, a recordkeeping requirement pursuant to 15 A NCAC 02D .0530(u) that uses projected actual emissions to avoid applicability of prevention of significant deterioration requirements, pursuant to Application 7400021.20B, for the increase in production on fiber manufacturing lines (ID Nos. DAP1 through DAP6).
- PSD avoidance conditions for NOx for multiple sources at Section 2.2 A.1 and for SO2 at Section 2.2 A.2.

The finished product from the proposed Impregnation line (ID. Nos. RMS-1 and PrePreg-1) will be used to replace materials that are currently produced offsite and shipped to the Avient facility. The materials produced by the new Impregnation line will replace materials that feed BACT affected sources (ID No. DAP-1 through DAP-6, permitted in Section 2.1 A). Because the proposed modification will not increase throughput, the modification will have no effect on the permits current BACT requirements. This was confirmed with facility consultant Jack Martin via email on January 30, 2025.

As discussed in Section 8 below, the proposed project will result in increases in VOC of less than 7 tpy and for PM less than 1tpy. These values are below the applicable PSD significance level thresholds (i.e., 40 tpy or VOC and 25/15/10 tpy for PM/PM10/PM2.5). Hence, PSD review does not apply to this project.

112(r)

The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This minor modification 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).

The proposed modification will not use any control devices. Therefore, CAM does not apply to the proposed modification.

7. Facility Wide Air Toxics

For the proposed Fiber Impregnation Line (ID Nos. RMS-1 and PrePreg-1) the facility estimates a max potential emission rate of 1.14 lbs/hr for ethyl acetate (CAS# 141-78-6) using mass balance. The 2024 emissions inventory does not indicate any emissions of ethyl acetate for existing emission sources at the facility. The TPER requirement under 02Q .0711 for ethyl acetate is 36 lbs/hr. Also, the modification will have no effect on existing permitted TAP limits listed under 02D .1100 Condition 2.2 B.2. Therefore, no further action is required due to the large margin of compliance with the TPER.

8. Facility Emissions Review

The proposed Fiber Impregnation Line (ID Nos. RMS-1 and PrePreg-1) the facility estimates the total annual mass of ethyl acetate to be used during a 12-month period is 5 tons. For emissions calculations ethyl acetate mass will be released to the atmosphere as a TAP and VOC emission. An additional 1.1 tons of potential VOC emissions are estimated from ethanol-based solutions used for periodic cleanings. Therefore, the estimated emission rate for VOCs is 6.1 ton/yr. The current actual emissions based on the 2023 emissions report is 66.65 tpy for VOC. Therefore, 72.75 tpy will be the estimated actual emissions following this modification. This was confirmed with facility consultant Jack Martin via email on January 29, 2025.

The max potential emissions rate of particulate matter is estimated to be less than .1 tpy for the proposed modification. See Section 5 under 02D .0515 for PM emissions review.

9. Compliance Status

DAQ has reviewed the compliance status of Avient. During the most recent inspection, conducted on July 23, 2024 by Betsy Huddleston of the Washington Regional Office, the facility appeared to be in compliance with all applicable requirements. The facility's Annual Compliance Certification was received on January 26, 2024 and indicated compliance with all applicable requirements in 2023.

Avient received NOV/NRE on November 07, 2022, consisting of three separate violations for improper O&M practices that resulted in excess downtime of THC CERMS for sources (ID Nos. AHU3, AHU7, and AHU10). All violations have been resolved as of November 30, 2022.

10. 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.

11. 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. A zoning determination was included with the application. It was signed by Bryan Jones, Lead Planner for the City of Greenville and states:

"The proposed operation is consistent with applicable zoning ordinances"

12. 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.

The proposed modification does not include any control equipment. Therefore, a D5 form was not necessary for the proposed modification.

13. Recommendations

The permit application for Avient Protective Materials LLC located in Greenville, Pitt 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. 05754T103.