NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Asheville Regional Office
County: Henderson
NC Facility ID: 4500017
Inspector's Name: Christopher Scott
Date of Last Inspection: 02/17/2021
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Coats American, Inc. d/b/a Coats North America

Facility Address:
Coats American, Inc. d/b/a Coats North America
1710 Brevard Road
Hendersonville, NC 28791

SIC: 2284 / Thread Mills
NAICS: 313312 / Textile and Fabric Finishing (except Broadwoven Fabric) Mills

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0515, 02D .0521, 02D .0524, 02D .1100, 02D .1806; 02Q .0711, 02Q .0317 of 02D .0530 and of 02D .1111
NSPS: 40 CFR 60, Subpart VVV
NESHAP/MACT: Avoidance of MACT
PSD: N/A
PSD Avoidance: VOCs
NC Toxics: N/A
112(r): N/A
Other: Removal of 15A NCAC 02D .0958 from the permit.

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Danny Fulcher Engineering Maintenance Manager (828) 693-4222 1710 Brevard Rd Hendersonville, NC 28791+3202	Annette Ward Plant Manager (828) 693-4222 1710 Brevard Road Hendersonville, NC 28791	Todd Wegenast Environmental Compliance Manager (850) 545-8142 1710 Brevard Road Hendersonville, NC 28791

Application Data

Application Number: 4500017.21A
Date Received: 07/09/2021
Application Type: Renewal
Application Schedule: TV-Renewal

Existing Permit Data

Existing Permit Number: 04795/T15
Existing Permit Issue Date: 05/16/2017
Existing Permit Expiration Date: 04/30/2022

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2020	---	1.02	107.52	0.8600	---	1.72	1.30 [Methanol (methyl alcohol)]
2019	---	1.0000	124.76	0.8400	---	1.53	1.14 [Methanol (methyl alcohol)]
2018	---	1.26	126.36	1.06	---	1.67	1.25 [Methanol (methyl alcohol)]
2017	---	1.07	135.07	0.8900	---	1.67	1.25 [Methanol (methyl alcohol)]
2016	---	1.10	128.56	0.9200	0.0600	1.66	1.26 [Methanol (methyl alcohol)]

Review Engineer: Alice Wessner

Review Engineer's Signature: **Date:**

Comments / Recommendations:
Issue: 04795/T16
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

Coats American, Inc. d/b/a Coats North America (Coats) currently holds Title V Permit No. 04795T15 with an expiration date of April 30, 2022, for development in the coating of high strength thread at their facility located in Hendersonville, Henderson County, North Carolina. The primary purpose of this application is for permit renewal. The renewal application was received on July 9, 2021, which was at least *nine* months prior to the expiration date, as required by General Permit Condition 3.K. 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

According to the report for the previous compliance inspection report dated February 17, 2021, by Christopher Scott, DAQ-Asheville Regional Office (ARO) Environmental Engineer: "This facility is engaged in coating high strength thread with a polymer, predominately nylon and Teflon (PTFE). The nylon polymer is dissolved in a solvent (primarily isopropyl alcohol); the thread passing through a dye applicator (permeator), a coating applicator (permeator), and then through a dryer. Teflon coated thread goes through the same coating towers, but the Teflon is dissolved in a water-based solvent (Figure 1). The facility has a process to modify the structure of nylon 6,6 to make it soluble in alcohol; this is referred to as the BCI process (Figure 2). The facility is permitted for two relatively small natural gas/No. 2 oil-fired boilers (only one boiler operates and fires strictly natural gas). The facility is also engaged in applying water repellant coating to thread."

Figure 1: Main Plant with most emission release points along high central structure. (from most recent inspection report.

Figure 2: BCI process building (from most recent inspection report)

3. History/Background/Application Chronology

History/Background

May 16, 2017 Air Permit No. 04795T15 was issued with an expiration date of April 30, 2022.

Application 4500017.21A Chronology

July 9, 2021 Received permit application 4500017.21A for renewal with no modification. The application was received within nine months of the expiration date.

July 14, 2021 Sent acknowledgment letter indicating that the application for permit renewal was complete.

June 23, 2022 Sent an email to Annette Ward verifying that the correct applicant name is "Coats American, Inc. d/b/a Coats North America.' Ms. Ward verified this in a return email.

June 24, 2022 Draft permit and review forwarded to Permitting supervisor for comments.

June 28, 2022 Comments received from Permitting Supervisor. Edits made to permit and review.

June 28, 2022 Draft permit and review sent to Christopher Scott of the Asheville Regional Office (ARO) and Samir Parekh of DAQ Compliance for comments.

July 1, 2022 Samir Parekh of DAQ Compliance indicated via email that there were no comments.

July 15, 2022 Christopher Scott of the Asheville Regional Office (ARO) indicated via email that he had no comments.

July 15, 2022 Draft permit forwarded to Coats for review and comments.

August 4, 2022 Todd Wegenast, Environmental Compliance Manager, with Coats indicated via e-mail that he had no comments on the draft permit.

XXXX XX, 2022 Draft permit and permit review forwarded to public notice.

XXXX XX, 2022 Public comment period ends. XX comments received.

XXXX XX, 2022 EPA comment period ends. XX comments received.

XXXX XX, 2022 Permit issued.

4. Permit Modifications/Changes

Coats requested in their permit application for renewal to **remove** the following insignificant emission sources:

I-Tank-IPA-1 – This tank has been taken out of service.
I-Tank-IPA-2 – This tank has been taken out of service.
I-Tank-MEOH – This tank is now used for storage of isopropyl alcohol as the site no longer stores methanol in an above ground storage tank. The applicant requested to rename this tank as I-Tank-IPA-1.
I-SRC-B-1 – This boiler is no longer in service.
I-BCT (biocide treatment process) – No longer in operation and there are no plans to resume operation.

The following changes were made to the new Air Permit No. 04795T16:*

Page No.	Section	Description of Changes
Cover Letter	N/A	Modified letter to reflect current name of facility, current dates, permit number, new Section Chief name, issuance and effective dates.
	Cover Letter	Added the NOTICE REGARDING THE RIGHT TO CONTEST A DIVISION OF AIR QUALITY PERMIT DECISION
	Attachment 2 Insignificant Activities list	Moved to Section 3 of the permit Updated footnotes to table Deleted insignificant activities Emission Source ID Nos. I-TANK-IPA-2, I-SRC-B-1 and I-BCT. Renamed insignificant activity Emission Source ID No. I-TANK-MEOH to I-TANK-IPA-1 and changed the description to 'One above ground isopropyl alcohol storage tank (10,000 gallon)
Permit Cover	Table of Contents	Added Section 3 Insignificant Activities Per 15A NCAC 02Q .0503(8) Added Section 4 General Permit Conditions
	All	Updated Permit Revision number in header Made minor corrections in capitalization and wording throughout permit Updated language throughout permit to be consistent with Permit Shell
4	Table 2.1 A	Removed reference to Rule 15A NCAC 02D .0958
6	Table 2.1 B	Removed reference to Rule 15A NCAC 02D .0958
8	2.2 A.3	Updated Condition to current language Updated TPERs Table
	3	Updated General Conditions to most recent version 6.0 dated 01/07/2022 Moved to Section 4 of permit
	Attachment List of Acronyms	Moved to Section 3 of renewed permit

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

There are changes to be made to the Title V Equipment Editor (TVEE) under this permit renewal.

5. Regulatory Review

Coats is subject to the following regulations. The permit was updated to reflect the most current stipulations for all applicable regulations, where necessary.

15A NCAC 02D .0515, Particulates from Miscellaneous Industrial Processes
15A NCAC 02D .0521, Control of Visible Emissions
15A NCAC 02D .0524, New Source Performance Standards (40 CFR 60, Subpart VVV)
15A NCAC 02D .0958 Work Practices for Sources of Volatile Organic Compounds
15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions
15A NCAC 02D .1100, Control of Toxic Air Pollutants
15A NCAC 02Q .0317 Avoidance Conditions for 02D .0530 and 02D .1111
15A NCAC 02Q .0711, Emission Rates Requiring a Permit

- 15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes

This regulation is applicable to any industrial process not subject to any other particulate emission control standard, and it limits allowable particulate matter emissions according to the process rate. It applies to the Modified Nylon 6,6 Manufacturing Process consisting of two precipitation tanks (ID Nos. SRC-BCI-1a and SRC-BCI-1b), a separator (ID No. SRC-BCI-2), a reactor (ID No. SRC-BCI-4) and a quench tank (ID No. SRC-BCI-5) as well as the sources in the Main Plant: four thread coating stations ((ID Nos. SRC-T-J, SRC-T-L, SRC-T-M, and SRC-T-N), a drug room (ID No. SRC-DR) and three groups of storage/mixing tanks ((ID Nos. SRC-2F, SRC-3F, and SRC-4F). The sources subject to this regulation shall have actual emissions less than those calculated from the following equations:

$E=4.10 \times P^{0.67}$, for process rates $\leq$ 30 tons per hour, OR
$E=55 \times P^{0.11} - 40$, for process rates > 30 tons per hour

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

The Permittee shall maintain production records and monitor types of materials and finishes and make this information available to DAQ personnel upon request. No reporting is required for particulate emissions from these sources. Continued compliance is anticipated, and this permit renewal does not affect this status.

- 15A NCAC 02D .0521, Control of Visible Emissions

Equipment manufactured and operating after July 1, 1971 and must not have visible emissions of more than 20 percent opacity when averaged over a six-minute period, except as specified in 15A NCAC 02D .0521(d). Visible emissions from the modified nylon 6,6 manufacturing process consisting of two precipitation tanks (ID Nos. SRC-BCI-1a, SRC-BCI-1b), a separator (ID No. SRC-BCI-2), a reactor (ID No. SCR-BCI-4), and a quench tank (ID No. SRC-BCI-5) at the Coats facility are subject to this regulation; however, there are no monitoring, record keeping, and reporting requirements required. If emission testing is required and the results of emission testing are above the limits mentioned above, the Permittee shall be deemed out of compliance with 15A NCAC 02D .0521. Continued compliance with this regulation is anticipated.

The equipment manufactured and operating prior to July 1, 1971, must not have visible emissions of more than 40% opacity when averaged over a six-minute period, except as specified in 15A NCAC 02D

.0521(d). Visible emissions from four thread coating stations (ID Nos. SRC-T-J, SRC-T-L, SRC-T-M, and SRC-T-N), the drug room (ID No. SRC-DR), and three groups of storage/mixing tanks and associated valves, pumps, fittings, and distribution lines (ID Nos. SRC-2F, SRC-3F, and SRC-4F) at the Coats facility are subject to this regulation; however, there are no monitoring, recordkeeping, and reporting requirements required. If emissions testing is required and the results of emission testing are above the limits mentioned above, the Permittee shall be deemed out of compliance with 15A NCAC 02D .0521. Continued compliance with this regulation is anticipated.

- 15A NCAC 02D .0524, New Source Performance Standards (40 CFR 60, Subpart VVV)

  This will be discussed below in Section 6 below.

- 15A NCAC 02D .0958, Work Practices for Sources of Volatile Organic Compounds
  On November 1, 2016, amendments to 15A NCAC 02D .0902 were finalized to narrow applicability of work practice standards in 15A NCAC 02D .0958 from statewide to the maintenance area for the 1997 8-hour ozone standard. This change is being made primarily because the abundance of biogenic VOC emissions in North Carolina results in ozone formation being limited by the amount of available nitrogen oxides (NOx) emissions. Provisions of the Clean Air Act require VOC requirements previously implemented in an ozone nonattainment area prior to redesignation to remain in place. However, facilities outside the maintenance area counties for the 1997 8-hour ozone standard would no longer be required to comply with the work practice standards in 15A NCAC 02D .0958. Henderson County was never in nonattainment for ozone and 15A NCAC 02D .0958 is no longer applicable to facilities, including Coats, within the county. Therefore, the permit condition for 15A NCAC 02D .0958 will be removed under this permit renewal. Please note that in the previous permit review for Air Permit No. 04795T15 dated May 16, 2017, it was stated that this condition would be removed from the permit; however, the condition was not removed.

- 15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions
  This regulation is a State-enforceable only requirement that applies to operations that may produce odorous emissions causing or contributing to objectionable odors beyond the facility's boundaries. The facility has consistently complied with the odor rule as there have been no reports of non-compliance in the five most recent compliance inspections conducted between 2016 and 2021.

- 15A NCAC 02Q .0317, Avoidance Conditions
  Coats has accepted permit limits on VOC to avoid applicability of 15A NCAC 02D .0530, Prevention of Significant Deterioration (PSD) and 15A NCAC 02D .1111, Maximum Achievable Control Technology. The avoidance condition for PSD is explained further in the section below. No changes to the PSD avoidance condition are associated with this renewal. As shown in the header to this review, the emissions of VOC are far below the PSD avoidance limit, and continued compliance is anticipated.

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

NSPS – The Permittee is currently required to comply with the New Source Performance Standard for Polymeric Coating of Supporting Substrates (40 CFR 60, Subpart VVV) because it applies to facilities for which construction, modification, or reconstruction began after April 30, 1987, and that apply a polymeric coating (as defined by the rule) to a substrate. The water-repellant fiber coating operation (ID No. I-SRC-WR-1) which includes: SSM Winders, SSM 1-10, SSM 11-15, SSM 16-20; TexliMesa Winders: TM1, TM2 and TM3 is subject to this rule. The Coats facility uses less than 95 Mg of VOCs per 12-month period or 104.72 tons of VOCs per year, so it is subject only to the monitoring, reporting and recordkeeping requirements of 60.744(b), 60.747(b) and 60.747(c). 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. This permit renewal does not affect this status and continued compliance is anticipated.

NESHAPS/MACT – The Permittee currently operates under a facility-wide permit restriction limiting emissions of any single HAP to less than 10 tons per year and to less than 25 tons per year for any combination of HAPs in order to be classified as a Title III minor facility for HAPs. To ensure compliance with these limits, the Permittee is required to calculate HAP emissions from specific sources by a combination of material balance, DAQ acceptable emission factors, approved stack test results, and EPA emission factors. Recordkeeping and semi-annual reporting requirements are also included in the current permit. The maximum annual HAP emissions from the facility shown on the most recent compliance report received January 26, 2022, showed maximum 12-month rolling total HAP emissions of 1.73 tons per year during the calendar year 2021 which indicates compliance with the 10/25 tons per year HAP minor limits. This permit renewal does not affect this status and continued compliance is anticipated.

PSD – Coats is a "grandfathered" PSD major facility (i.e., facilities that existed prior to 1977 with a potential of greater than 250 tons per year VOC). In a past permit modification, the Permittee requested modification (T10) of its Modified Nylon 6,6 manufacturing process. That modification had a potential increase in VOC emissions greater than the significance level for PSD applicability. Rather than proceeding through PSD permitting, the Permittee chose to limit the emissions of VOC from this group of sources to less than 40 tons per year (Permit Section 2.1 A.3. a.) in Permit No. 04795T10 dated August 6, 2004. According to the most recent inspection report from Christopher Scott of the ARO, the VOC emissions are calculated each month by using data from the June 29, 1999, stack test that was used to create a factor for VOC emissions for each batch produced. This factor is 288.2 lbs of VOCs per batch (108 gallons per batch). The air permit requires semi-annual reporting of emissions from the BCI process. The last report received on January 26, 2022, shows the maximum rolling total VOC emissions at 3.17 tons per year for the first six months of calendar year 2021 which is well below the 40 tpy limit. Continued compliance is expected, and this permit renewal should not affect this status.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store one or more of the regulated substances in quantities above the thresholds in the Rule. According to the most recent compliance inspection report dated February 17, 2021, by Christopher Scott, DAQ-Asheville Regional Office (ARO) Environmental Engineer, "*the facility no longer uses the bulk methaform storage tank. The facility now stores, at a maximum, three 55-gallon drums of methaform onsite at any given time.*" Therefore, this change ensures that 15A NCAC 2D .2100, Risk Management Plan (RMP), does not apply. The requirements of the RMP were removed from the permit during the T15 permit renewal.

CAM – 40 CFR 64 requires that a compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold and use a control device to meet an applicable standard. The potential pre-controlled emissions are less than the Title V thresholds and there are no permitted control devices at this facility. Therefore, CAM is not applicable.

7. Facility Wide Air Toxics

15A NCAC 2D .1100; Control of Toxic Air Pollutants (State-enforceable only)

The facility-wide emission rate of formaldehyde was expected to exceed the toxic air pollutant (TAP) permitting emission rate (TPER) pursuant to 15A NCAC 2Q .0711. Coats has previously demonstrated compliance with the acceptable ambient levels for this TAP using SCREEN3 (96043) air dispersion model. The maximum impacts reached 47% of the 1-hour AAL for formaldehyde as stated by the modeling analysis that was reviewed and approved by the Air Quality Analysis Branch on January 22, 2007. Actual emissions have remained well below the modeled rates (permit limits). The latest quarterly report (from IBEAM) summarizing TAP emissions was received on April 29, 2022, and showed compliance with the emission limits is summarized as follows:

Emission Source	Formaldehyde Emission Limit	Maximum Reported Formaldehyde Emissions

	(lbs/hr)	(lbs/hr)
Water-repellant fiber coating station	0.03	0.0094 lbs/hr
Modified Nylon 6,6 Manufacturing Process	0.64	0.056 lbs/hr
Main plant (coating towers) except boilers	0.144	0.0266 lb/hr

The Permittee shall maintain a logbook in either written or electronic format on-site and made available to DAQ upon request. The logbook shall record the hourly formaldehyde emissions from all sources grouped under Modified Nylon 6,6 Manufacturing Process, all sources grouped under Main Plant (except combustion sources), and the water-repellant fiber coating station. The Permittee is also required to report quarterly to the Regional Office Supervisor of DAQ quarterly the single highest, hourly emission rate for formaldehyde for the previous three months from all the sources grouped under Modified Nylon 6,6 Manufacturing Process, all sources grouped under Main Plant (except combustion sources), and the water-repellant fiber coating station. Continued compliance is anticipated and no changes to this regulation are made with this renewal.

15A NCAC 2Q .0711; Toxic Air Pollutant Emissions Limitations and Reporting (State-enforceable only)

This regulation requires the facility to obtain a permit prior to exceeding the TPER from all non-exempt facility wide sources combined. TAP emissions from the boilers are exempt.

TPERs Limitations				
Pollutant (CAS No.)	**Carcinogens (lb/yr)**	**Chronic Toxicants (lb/day)**	**Acute Systemic. Toxicants (lb/hr)**	**Acute Irritants (lb/hr)**
Fluorides		0.34	0.64	
Hydrogen fluorides (7664-39-3)		0.63		0.064

According to the most recent inspection report from Christopher Scott of the Asheville Regional Office dated February 17, 2021, the facility has set up a spreadsheet for tracking HF and F emissions from the sintering process. The facility has not triggered a requirement to obtain a permit to emit HF and F. The facility is required to ensure HF and F emission are below the Toxics Permitting Emission Rates (TPERs) contained in 2Q .0711. The data used to calculate the quantity of Teflon (PTFE) used is as follows:

Sintered PTFE	% of PTFE	*% Added/lb of thread	*%PTFE/ lb thread	Limit (lbs/hr)
Fluoride	0.022	22.0%	0.0000484	0.064
Hydrogen Fluoride	0.022	22.0%	0.0000484	0.064

*in June 2009 the PTFE thread pick-up was changed to 22.0% added/lb of thread result in the following: 0.000374 %PTFE/lb thread changed to 0.0000484 %PTFE/lb thread.

The facilities tracking system showed the following Fluoride and HF emissions during past inspections:

PTFE Sintering Process	HF & F Emissions 2019 (lb/hr)	HF & F Emissions 2018 (lb/hr)	HF & F Emissions 2017 (lb/hr)	HF & F Emissions 2016 (lb/hr)	HF & F Emissions 2015 (lb/hr)
Quarter 1	0.000455	0.000586	not noted	not noted	0.00074
Quarter 2	0.000508	0.000498	not noted	not noted	0.00787
Quarter 3	-	0.000530	0.000225	not noted	0.000452

Quarter 4	-	0.000453	0.000432	not noted	-

The facility is maintaining daily logs of the amount of material sintered. Compliance with the TPER is indicated during past inspections. If the maximum hourly emission rates were maintained 24 hours per day compliance with the daily TPER for HF and F is indicated.

The Title V Annual Compliance Certification for 2021 was received on February 15, 2022 and indicated compliance for the year.

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 2016 through 2020 are provided in the header of this permit review.

9. Compliance Status

DAQ has reviewed the compliance status of this facility. During the most recent inspection report dated February 17, 2021, by Christopher Scott, DAQ's ARO indicated that the facility appeared to be in compliance with permit 04795T15 as well as no violations noted for a five-year period prior to the inspection.

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.
- Since this application was a renewal with no modification, no emission increases were noted for PSD increment tracking purposes.

12. Recommendations

The permit renewal application for Coats American, Inc. d/b/a Coats North America in Hendersonville, Henderson County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying with or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 04795T16.