

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: Month XX, 2023

Region: Winston-Salem Regional Office
County: Alamance
NC Facility ID: 0100276
Inspector's Name: Andrew Kormos
Date of Last Inspection: 04/05/2022
Compliance Code: 3 / Compliance - inspection

<p style="text-align: center;">Facility Data</p> <p>Applicant (Facility's Name): Liggett Group LLC</p> <p>Facility Address: Liggett Group LLC 100 Maple Lane Mebane, NC 27302</p> <p>SIC: 2111 / Cigarettes NAICS: 312221 / Cigarette 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: 15A NCAC 02D .0503, .0515, .0516, .0521, .0614, and .1806 NSPS: 15A NCAC 02D .0524 – Subpart Dc and III NESHAP: 15A NCAC 02D .1111 – Subpart ZZZZ PSD: N/A PSD Avoidance: 15A NCAC 02Q .0317 NC Toxics: 15A NCAC 02D .1100 and 02Q .0711 112(r): N/A Other: 15A NCAC 02Q .0317 – Avoidance Conditions for 15A NCAC 02D .1111 – Subpart JJJJJ</p>
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Contact Data			Application Data
<p style="text-align: center;">Facility Contact</p> <p>Vince Fallon, P.E. Mach. Dev./Env. Engineer (919) 304-7793 100 Maple Lane Mebane, NC 27302</p>	<p style="text-align: center;">Authorized Contact</p> <p>Luke Jackson VP - Manufacturing Operations (919) 304-7700 100 Maple Lane Mebane, NC 27302</p>	<p style="text-align: center;">Technical Contact</p> <p>Vince Fallon, P.E. Mach. Dev./Env. Engineer (919) 304-7793 100 Maple Lane Mebane, NC 27302</p>	<p>Application Number: 0100276.23A Date Received: 12/06/2022 Application Type: Renewal Application Schedule: TV-Renewal <p style="text-align: center;">Existing Permit Data</p> Existing Permit Number: 08823/T14 Existing Permit Issue Date: 06/12/2018 Existing Permit Expiration Date: 05/31/2023</p>

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	0.0200	3.34	91.71	2.60	1.29	0.1312	0.0530 [Acetaldehyde]
2020	0.0200	3.26	93.48	2.60	1.33	0.1364	0.0554 [Acetaldehyde]
2019	0.0200	3.19	100.42	2.57	1.18	0.1372	0.0560 [Acetaldehyde]
2018	0.0200	3.15	104.94	2.52	1.58	0.1356	0.0560 [Acetaldehyde]
2017	0.0221	3.33	105.78	2.68	1.45	0.1329	0.0552 [Hexane, n-]

<p>Review Engineer: David B. Hughes</p> <p>Review Engineer's Signature: _____ Date: Month XX, 2023</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 08823/T15 Permit Issue Date: Month XX, 2023 Permit Expiration Date: Month XX, 2028</p>
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I. Purpose of Applications

Application No. 0100276.23A

This permitting action is a renewal of an existing Title V permit pursuant to 02Q .0513. The existing Title V permit (**08823T14**) was issued on **June 12, 2018**, with an expiration date of **May 31, 2023**. The renewal application **0100276.23A** was received on **December 6, 2022**. This application was deemed a late submittal because it was received less than 6 months prior to the original expiration date **May 31, 2023**.

The facility also submitted a 502(b)(10) notification (**0100276.21A**) which was received **October 5, 2021** to replace two existing No.2 fuel oil/natural gas-fired hot water heaters (6.6 million Btu per hour heat input capacity, each) (**ID Nos. ES-PB003B and ES-PB004B**) with two new natural gas-fired hot water heaters (1.44 million Btu per hour heat input capacity, each) (**ID Nos. IES-PB003B and IES-PB004B**) with low NO_x burners.

II. Facility Description

Liggett operates a cigarette manufacturing facility at its Mebane site. The facility is internally divided into two areas. One side of the facility is the primary tobacco processing operation, which consists of initial tobacco processing and flavoring. The other side of the facility comprises the cigarette making operation, where the processed tobacco is formed into cigarettes and the cigarettes are packaged. A process description, as provided in a previous permit revision and inspections, is presented below. This facility currently operates 24 hours per day, 5 days per week, 50 weeks per year.

Tobacco Processing Operation

The facility receives tobacco already de-stemmed and in bales. The bales are fed into the direct cylinder conditioner that introduces steam from one of the facility's boilers to raise the moisture content. The tobacco is then conveyed to the casing steamer, where some flavoring is added. Ingredients added to the tobacco include propylene glycol, glycerin, and invert sugar where steam is utilized in this process as well. Different tobaccos are blended and then dried in the steam expansion tobacco dryer, which incorporates a closed loop cyclone as part of the drying process. The final step is in the top flavoring system where alcohol is used as a carrier for various flavorings. The alcohol/flavoring mixture is injected at a metered rate for the amount of tobacco present. The tobacco is then conveyed to a holding area until it is needed on the manufacturing side.

Cigarette Manufacturing Operation

The cigarette making operation consists of eleven cigarette-making machines and a menthol applicator. The facility only has 9 of the 11 permitted cigarette making machines installed. Six of the cigarette machines are capable of processing 10,000 cigarettes per minute, one machine can process 5,000 cigarettes per minute, one machine can make 6,500 cigarettes per minute, and one machine can make 3,000 cigarettes per minute. Processed and finished tobacco is conveyed to each cigarette-making machine as needed. The machines assemble tobacco, paper, and filter material into finished cigarettes. The menthol applicator applies menthol/ethyl alcohol solution to the tissue side of foil used as the inner lining for the cigarette packs. Equipment also packs the cigarettes into packs, then cartons, then cases, which are the finished products that are shipped out of the facility.

III. History/Background/Application Chronology

June 12, 2018 – Permit No. **08823T14** issued as a Title V renewal.

October 5, 2021 – DAQ received a Notification of Title V Permit 502(b)(10) applicability determination application **0100276.21A** to replace two existing hot water heaters (ID Nos. ES-PB003 and ES-PB004) with two new hot water heaters (ID Nos. ES-PB003B and ES-PB004B).

April 5, 2022 – Andrew Kormos of the Winston-Salem Regional Office (WaRO) completed the annual compliance inspection of the facility.

December 06, 2022 – DAQ received Permit Application **0100276.23A**, as a Title V renewal. The application was deemed complete for processing.

January 20, 2023 – Permit Application **0100276.23** was assigned to permit engineer David B. Hughes.

March 24, 2023 - DRAFT permit sent to Permittee, Rahul Thaker - Supervisor, WSRO and Samir Parekh for comment. Wesley Z. Brummer (Leaf Environmental & Engineering, P.C.) provided comments on draft permit and review via e-mail on **April 5, 2023**. Samir Parekh provided comments pertaining to CAM via email on **April 4, 2023**. Andrew Kormos (WSRO) provided comments on the permit on **April 5, 2023**.

Month XX, 2023 - Draft permit and review sent to 30-day public comment and 45-day EPA review periods.

Month XX, 2023 - 30-day public comment period ended; no comments received.

Month XX, 2023 – 45-day EPA Review period ended; no comments received.

Month XX, 2023 – Jenny Sheppard (DAQ) verified TVEE from David B. Hughes’s changes.

Month XX, 2023 – Air Permit No. **08823T15** issued as a Title V permit.

IV. Permit Modifications/Changes and TVEE Discussion

The following table provides a summary of the changes to the permit.

Page No.	Section	Description of Changes
Global	Global	-Updated the application number and complete date. -Updated permit revision number to T15. -Updated the issuance/effective dates of permit.
Cover Letter	Cover Letter	-Updated PSD increment tracking statement.
3	List of Acronyms	-Moved List of Acronyms from end of permit.
4	Section 1 Equipment Table	-Removed two existing No. 2 fuel oil/natural gas-fired hot water heaters (6.6 MMBtu/hr heat input capacity, each) (ID Nos. ES-PB003 and ES-PB004).
5 & 6	2.1 A Table	-Removed two existing No. 2 fuel oil/natural gas-fired hot water heaters (6.6 MMBtu/hr heat input capacity, each) (ID Nos. ES-PB003 and ES-PB004). -Removed two existing No. 2 fuel oil/natural-gas-fired hot water heaters (6.6 MMBtu/hr heat input capacity, each) (ID Nos. ES-PB003 and ES-PB004) from 15A NCAC 02Q .0317 Avoidance Condition 15A NCAC 02D .1111, 40 CFR Part 63, Subpart JJJJJJ.

Page No.	Section	Description of Changes
7 - 9	2.1 A.1.a & d 2.1 A.3.a & d 2.1 A.4.a & c	-Removed two existing No. 2 fuel oil/natural gas-fired hot water heaters (6.6 MMBtu/hr heat input capacity, each) (ID Nos. ES-PB003 and ES-PB004).
9 & 10	2.1 A.6.a	-Removed two existing No. 2 fuel oil/natural-gas-fired hot water heaters (6.6 MMBtu/hr heat input capacity, each) (ID Nos. ES-PB003 and ES-PB004) from 15A NCAC 02Q .0317 Avoidance Condition 15A NCAC 02D .1111, 40 CFR Part 63, Subpart JJJJJ.
17 & 18	2.2 A.1 2.2 A.2 2.2 A.3	-Separated 2.2 A.1 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC .0530: PREVENTION OF SIGNIFICANT DETERIORATION into 2.2 A.1, 2.2 A.2, and 2.2 A.3.
23	Section 3 Insignificant Activities	-Moved Insignificant Activities list and removed footnote 3. -Added two new natural gas-fired hot water heaters (1.44 MMBtu/hr heat input capacity, each) (ID Nos. IES-PB003B and IES-PB004B) with low NO _x burners. The two new hot water heaters have emissions of less than 5 tons per year and 1000 pounds of HAPs.
24 - 32	Section 4 General Conditions	-Updated shell conditions (v6.0, 01/07/2022).

There were minor modifications to the equipment descriptions needed in Title V Equipment Editor (TVEE).

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 02D .0503, "Particulates from Fuel Burning Indirect Heat Exchangers"
 15A NCAC 02D .0515, "Particulates from Miscellaneous Industrial Processes"
 15A NCAC 02D .0516, "Sulfur Dioxide Emissions from Combustion Sources"
 15A NCAC 02D .0521, "Control of Visible Emissions"
 15A NCAC 02D .0524, "New Source Performance Standards (40 CFR Part 60 Subpart Dc)"
 15A NCAC 02D .0524, "New Source Performance Standards (40 CFR Part 60 Subpart III)"
 15 A NCAC 02D .0614, "Compliance Assurance Monitoring"
 15A NCAC 02D .1100, "Control of Toxic Air Pollutants" (*State-Enforceable Only*)
 15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subpart ZZZZ)"
 15A NCAC 02D .1111, "Maximum Achievable Control Technology (40 CFR 63, Subpart JJJJJ)"
 15A NCAC 02D .1806, "Control and Prohibition of Odorous Emissions"
 15A NCAC 02Q .0317, "Avoidance Conditions" (for 40 CFR Part 63 Subpart JJJJJ, NESHAP for Boilers at Area Sources)
 15A NCAC 02Q .0317, "Avoidance Conditions" (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)
 15A NCAC 02Q .0711, "Emission Rates Requiring a Permit" (*State-Enforceable Only*)

An extensive review for each applicable regulation is not included in this document. The facility's status with respect to all regulations has not changed. A review for the two new hot water heaters (ID Nos. ES-PB003B and ES-PB-004B) represented through 502(b)(10) notification is discussed below. For a discussion of MACT, CAM, and PSD requirements, see Section VI. The permit will be

updated to reflect the most current stipulations for all applicable regulations. Detailed changes are noted in the above Table of Changes.

A. Two natural gas-fired hot water heaters (ID Nos. IES-PB003B and IES-PB004B)

1. 15A NCAC 02D .0503 – Particulates from Fuel Burning Indirect Heat Exchangers

This regulation applies to particulate matter (PM) emissions from indirect heat exchangers (**ID Nos. IES-PB003B and IES-PB004B**).

Emissions of PM from combustion of natural gas and No. 2 fuel oil that are discharged from the boiler into the atmosphere, shall not exceed PM emission rate as derived using 02D .0503(c).

Accordingly, allowable emissions of particulate matter (PM) from burning of natural gas and No. 2 fuel oil shall be calculated as follows.

$$E = 1.090 \times Q^{-0.2594} \quad \text{Where: } E = \text{allowable PM emission rate in lb/million Btu heat input}$$

$$Q = \text{maximum heat input rate in million Btu/hour at the plant site}$$

The maximum heat input rates of all permitted boilers and these new boilers requested to be permitted, have been considered for estimating the PM emission rate of these new sources, as per 02D .0503(e).

$$Q =$$

- + [15.75 million Btu/hr] (heat input of existing natural gas/No. 2 oil-fired boiler ES-PB001A)
- + [16.8 million Btu/hr] (heat input of existing natural gas/No.2 oil-fired boiler ES-PB002)
- [6.6 million Btu/hr x 2] (heat input of replaced No. 2 fuel oil/natural gas-fired hot water heaters ES-PB003 and ES-PB004)
- + [1.44 million Btu/hr x 2] (heat input of replacement (insignificant activities) natural gas-fired hot water heaters IES-P003B and IES-P004B)
- + [2.014 million Btu/hr] (heat input of natural gas-fired, six color label press ES-LP001)
- + [2.685 million Btu/hr] (heat input of natural gas-fired, eight-deck carton press ES-CP001)
- + [5.356 million Btu/hr] (heat input of stem expansion tobacco dryer fired with natural gas ES-HDT001)

$$= 32.285 \text{ million Btu/hr}$$

$$\text{Therefore, } E = 1.090 \times 32.285^{-0.2594}$$

$$= 0.44 \text{ pounds per million Btu heat input}$$

It needs to be emphasized here that in setting an allowable limit under 02D .0503, maximum heat input rate of all permitted indirect exchangers including any insignificant activity need to be considered.

Using the AP-42 emission factor for natural gas firing, the PM emission rate can be estimated as

$$(0.52 \text{ lb/million ft}^3) / (1020 \text{ Btu/ft}^3) = \mathbf{0.00051 \text{ lb/million Btu}}$$

Compliance with the PM emission standard of 02D .0503 is expected, as the worst-case potential emission rate (0.00051 lb/million Btu) is less than the allowable emission rate (0.44 lb/million Btu). Because the worst-case potential emission rate is significantly lower than the allowable emission rate, no monitoring/recordkeeping/reporting will be required for particulate emissions from the boilers due to firing of natural gas.

2. 15A NCAC 02D .0516 – Sulfur Dioxide Emissions from Combustion Sources

Sulfur dioxide emissions from the two hot water heaters (**ID Nos. IES-PB003B and IES-PB004B**) is limited to 2.3 pounds per million Btu heat input.

Using AP-42 emission factors, SO₂ emissions from natural gas are estimated to be less than 2.3 lb/MM/Btu, as follows:

AP-42 emission factor for natural gas = 0.6 lbs /million standard cubic feet
 AP-42 heat value for natural gas = 1,020 million Btu

$$\frac{0.6 \text{ lbs}}{1 \times 10^6 \text{ scf}} \times \frac{1 \times 10^6 \text{ scf}}{1,020 \text{ mmBtu}} = \frac{0.0006 \text{ lb SO}_2}{\text{mmBtu}}$$

Because worst case SO₂ emission rates are estimated to be less than the allowable SO₂ emission rate (2.3 lb SO₂/mmBtu), no monitoring recordkeeping, or reporting shall be required to demonstrate compliance with this limitation. Compliance is indicated, as natural gas combustion results in negligible sulfur dioxide emissions.

3. 15A NCAC 02D .0521 – Control of Visible Emissions

Hot water heaters (**ID Nos. IES-PB003B and IES-PB004B**) are limited to an opacity of 20%. Visible emissions (VE) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. Visible emissions from the natural gas-fired boilers are generally negligible. Compliance is expected.

4. 15A NCAC 02D .0524 – New Source Performance Standards (40 CFR Part 60, Subpart Dc – Standards of Performance for New Stationary Sources

Hot water heaters (**ID Nos. IES-PB003B and IES-PB004B**) are not subject to 40 CFR Part 60, Subpart Dc due to the maximum heat input from both hot water heaters being less than 10 million Btu per hour (ES-PB003B and ES-PB004B are rated 1.44 million Btu per hour each) applicable cut-off.

5. 15A NCAC 02D .1111 – Maximum Achievable Control Technology (40 CFR Part 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

The facility is an area source for HAPs. Hot water heaters (**ID Nos. IES-PB003B and IES-PB004B**) burn only natural gas and are exempt from the Area Source Boiler MACT (40 CFR 63, Subpart JJJJJ).

6. 15A NCAC 02D .1806 – Control and Prohibition of Odorous Emissions (State-enforceable only)

The facility is subject to this regulation because it has the potential to be a source of odorous emissions. It requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility boundaries.

Potential to Emit for Hot Water Heaters (IES-PB003B and IES-PB004B)

Criteria Air Pollutant Emissions

Pollutant	Potential Before Controls / Limitations tons/year	Potential After Controls / Limitations tons/year	Emission Factor lb/mmBtu	
			uncontrolled	controlled
PM (TSP)	0.00	0.00	0.001	0.001
PM ₁₀	0.00	0.00	0.000	0.000
PM _{2.5}	0.00	0.00	0.000	0.000
SO ₂	0.00	0.00	0.001	0.001
NO _x	0.62	0.31	0.098	0.049
CO	0.52	0.52	0.082	0.082
VOC	0.03	0.03	0.005	0.005

Hazardous Air Pollutant Emissions

Pollutant	Potential Before Controls / Limitations lb/year	Potential After Controls / Limitations lb/year	Emission Factor lb/mmBtu	
			uncontrolled	controlled
Highest Individual HAP (Hexane)	2.23E+01	2.23E+01	1.76E-03	1.76E-03
Total HAP	2.33E+01	2.33E+01	1.84E-03	1.84E-03

The largest criteria pollutant is NO_x with a potential to emit (PTE) of 0.62 ton per year (tpy) considering the hot water heaters are equipped with a low NO_x burner. Similarly, the largest HAP is hexane with a PTE of 2.23E+01 pounds per year (lb/yr). The emissions from the two new hot water heaters (**ID Nos. IES-PB003B and IES-PB004B**) are less than the 5 tpy emission limit for criteria pollutants and less than 1000 lb/yr for HAP. Therefore, the two new hot water heaters are deemed as Insignificant Activity.

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

NSPS

As discussed below, the Permittee is currently subject to New Source Performance Standards (NSPS), 40 CFR 60, Subpart Dc “Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.” This renewal does not affect the NSPS status of the facility.

40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial Commercial Institutional Steam Generating Units

40 CFR Part 60, Subpart Dc is applicable to units that began construction, modification, or reconstruction after June 9, 1989, and has a maximum design heat input capacity between 10 and 100 MMBtu/hr. The two natural gas/No. 2 fuel oil-fired boilers (**ID Nos. ES-PB001A and ES-PB002**) are subject to 40 CFR Part 60, Subpart Dc. The maximum sulfur content of any fuel oil received and fired in the boiler shall not exceed 0.5 percent by weight. This renewal does not affect the NSPS status of the facility.

40 CFR Part 60, Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The 750kW diesel/natural gas-fired emergency generator set consisting of two 375kW engines (**ID No. ES-EG001**) and diesel engine fire protection booster pump (**ID No. IES-FP001**) are subject to 40 CFR Part 60, Subpart IIII. The emergency generator is required to use diesel fuel with a maximum sulfur content of 15 ppm, and a minimum cetane index of 40 or a maximum aromatic content of 35% volume. This engine is also required to have a non-resettable hour meter installed prior to start-up. The facility is required to purchase an engine certified to the emission standards as specified under 40 CFR 60, Subpart IIII. This unit is allowed 100 hours per year for maintenance and testing. The engine can be used for non-emergency purposes up to 50 hours per year which are counted towards the previously allotted 100 hours per year for maintenance and testing. The facility is also required to submit semi-annual reports summarizing all monitoring and recordkeeping activities. This renewal does not affect the NSPS status of the facility.

NESHAPS/MACT

Generally, National Emissions Standards for Hazardous Air Pollutants (NESHAPS) are applicable to major sources of HAP. NESHAPS are also applicable to area sources for certain Industrial Category of Sources. A HAP major source is defined as having potential emissions in 10 tpy or more for any individual HAP and/or potential emissions of 25 tpy or more for total HAP.

40 CFR Part 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

Liggett is not a major source of HAP emissions. The 750kW diesel/natural gas-fired emergency generator set consisting of two 375kW engines (**ID No. ES-EG001**) and diesel engine fire protection booster pump (**ID No. IES-FP001**) are subject to 40 CFR Part 63, GACT Subpart ZZZZ. Since the emergency generator is classified as new stationary RICE located at an area source of HAP emissions, the facility meets the requirements of Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII as discussed above the NSPS section. The existing fire pump (ID No. IES-FP001) still needs to comply with 40 CFR Part 63, GACT Subpart ZZZZ. This renewal does not affect the MACT status of the facility.

15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .1111, 40 CFR Part 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

The two natural gas/No. 2 fuel oil-fired boilers (**ID Nos. ES-PB001A and ES-PB002**) have an avoidance condition for 40 CFR 63, Subpart JJJJJJ. Per 40 CFR 63.11195(e), boilers meeting the definition of natural gas boilers under 40 CFR 63.11237 are exempt from Subpart JJJJJJ. The definition of natural gas boilers allows the use of liquid fuel in the boiler only during period of gas

curtailment, periodic testing, gas supply interruptions, and startups. Thus, the facility must maintain records of the time periods liquid fuel is fired and the reasons for firing liquid fuel. If the boilers fire any other type of fuel for reasons other than those allowed under the definition of a natural gas boiler, then the facility must submit a notification within 30 days of the fuel switch and must comply with the requirements for that fuel type within 180 days of the fuel switch. The facility has not burned No. 2 fuel oil in any of the affected sources in several years. This renewal does not affect the MACT status of the facility.

PSD

The facility is a minor source of VOCs for PSD purposes. The Permittee is subject to 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530, Prevention of Significant Deterioration. The steam expansion tobacco dryer fired with natural gas (**ES-HDT001**), the tobacco top flavoring system (**ES-TF001**), and eleven cigarette making machines (**ES-CM001-B**) are limited to less than 250 tons per consecutive 12-month period of volatile organic compounds (VOC) emissions. The natural gas-fired six color label press (**ES-LP001**) and the natural gas-fired eight-deck carton press (**ES-CP001**) are limited to less than 250 tons per consecutive 12-month period of volatile organic compounds (VOC) emissions. The menthol applicator (**ES-MA003B**) is limited to less than 40 tons per consecutive 12-month period of volatile organic compounds (VOC) emissions. The facility must calculate VOC emissions by multiplying the total amount of each type of VOC-containing material consumed each month by the VOC content of the material. Calculations and the total VOC emissions should be recorded monthly in a logbook. The facility must submit a semi-annual report containing the VOC emissions for each 12-month period over the previous 17 months. This renewal does 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. This renewal does not affect this status.

CAM

40 CFR Part 64 is applicable to any pollutant-specific emission unit, if the following three conditions are met:

- 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's pre-control potential emission rate exceeds either 100 tpy (for criteria pollutants) or 10/25 tpy (for HAP's).

The pneumatic feed conveyance system (**ID No.ES-CM001-A**), eleven cigarette making machines (**ID No. ES-CM001-B**), central dust collection system (**ID No. ES-CDS001**), and steam expansion tobacco dryer (**ID No. ES-HDT001**) are subject to an emission limit under 02D .0515 and potential uncontrolled particulate emissions from each equipment exceed the major source threshold. Therefore, these sources are subject to the CAM requirements and are required to monitor visible emissions and pressure-drop measurements on the bagfilters (**ID Nos. CD-CM001-A1, CD-CM001-B1, CD-CDS001-B, and CD-HDT001a**) as outlined under this permit condition.

This permit condition requires daily VE observations and daily pressure drop readings for the four bagfilters (**ID Nos. CD-CM001-A1, CD-CM001-B1, CD-CDS001-B, and CD-HDT001a**). Bagfilter (**ID No. CDS001-**

B) has not been installed. A VE excursion is defined as defined as the presence of VE in excess of 5% for greater than 30 minutes. An excursion as defined as pressure drop measured in inches of water outside the ranges of 0.2-5.0 for CD-HDT001, 0.5-4.0 for CD-CM001-A1, and 0.5-6.0 for CD-CM001-B1.

Excursions trigger an inspection, corrective action, and a recordkeeping requirement. The Quality Improvement Threshold (QIP) is five excursions in a 6-month reporting period. The facility is also required to submit semi-annual reports summarizing all monitoring and recordkeeping activities. The report must also include summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken; summary information on the number, duration, and cause; and a description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator must include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring. This renewal does not affect this status.

VII. Facility Wide Air Toxics

15A NCAC 02D .1100: Control of Toxic Air Pollutant Emissions

The facility submitted a revised dispersion modeling analysis to DAQ on December 18, 2013 for acetic acid and formaldehyde generated from the direct cylinder conditioner (ES-DCC001B) and steam expansion tobacco dryer (ES-HDT001). The modeled emission rates were based on the plant’s maximum production. The maximum impacts from formaldehyde and acetic acid emissions constituted 4% and 10% of the AAL, respectively. The following table lists the emission limits under this permit condition.

EMISSION SOURCE(S)	TOXIC AIR POLLUTANT(S)	EMISSION LIMIT(S)
One direct cylinder conditioner (ID No. ES-DCC001B)	Acetic acid	0.61 lbs/hour
One direct cylinder conditioner (ID No. ES-DCC001B)	Formaldehyde	0.0028 lbs/hour
Steam expansion tobacco dryer (ID No. ES-HDT001)	Acetic acid	2.81 lbs/hour
Steam expansion tobacco dryer (ID No. ES-HDT001)	Formaldehyde	0.06 lbs/hour

To demonstrate compliance, the direct cylinder conditioner (ES-DCC001B) is limited to 20,000 lbs of tobacco per hour and the steam expansion tobacco dryer (ES-HDT001) is limited to 19,800 lbs of tobacco blend per hour. Within 30 days after each calendar quarter, the facility must submit a report containing the amount of tobacco conditioned per month; the total conditioner hours of operation per month; the amount of tobacco blend dried per month in the dryer; and the total hours of dryer operations per month. Monthly records are tracked electronically. This renewal does not affect this status.

15A NCAC 02Q .0700: Toxic Air Pollutant Procedures

The 02Q .0711 rule requires the facility to be operated and maintained in a manner such that any TAPs listed under 02Q .0711 does not exceed the Toxic Permit Emission Rates (TPERs) listed in 02Q .0711. A permit to emit any of the TAPs is required prior to exceeding any TPER limit. The facility must maintain operational records to demonstrate that actual TAP emissions are less than the TPERs.

The following table shows the TAPs that are listed under this permit condition and the actual emissions reported in the 2020 CY Emissions Inventory. The facility appears to be in compliance with 02Q .0711.

Toxic Air Pollutant	2Q .0711 TPER	CY2020 Actual Emissions	CY2021 Actual Emissions
Acetaldehyde (75-07-0)	6.8 lb/hr	0.013 lb/hr	0.012 lb/hr
Ammonia (7664-41-7)	0.68 lb/hr	0.255 lb/hr	0.297 lb/hr
Benzene (71-43-2)	8.1 lb/yr	Not Reported	Not Reported
Carbon disulfide (75-15-0)	3.9 lb/day	Not Reported	Not Reported
Cresol (1319-77-3)	0.56 lb/hr	Not Reported	Not Reported
Ethyl acetate (141-78-6)	36 lb/hr	Not Reported	Not Reported
Phenol (108-95-2)	0.24 lb/hr	Not Reported	Not Reported
Toluene (108-88-3)	14.4 lb/hr; 98 lb/day	Not Reported	Not Reported

The sum of CY2020 and CY2021 for Acetaldehyde (0.013 lb/hr + 0.012 lb/hr) equals 0.025 lb/hr. This is below the Acetaldehyde emission limit of 6.8 lb/hr. The sum of CY2020 and CY2021 for Ammonia (0.255 lb/hr + 0.297 lb/hr) equals 0.552 lb/hr. This is below the Ammonia emission limit of 0.68 lb/hr

VIII. Facility Emissions Review

See Table in the header for a summary of the actual emissions as reported to DAQ from the years 2017 to 2021.

IX. Stipulation Review

The facility was last inspected by Mr. Andrew Kormos on **4/5/2022** (Inspection Report – **04/14/2022**). Based on his observations the facility appeared to be in compliance with their Title V permit requirements.

X. Public Notice/EPA 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 public comment period, with an opportunity for a public hearing. EPA's 45-day review period, as required per 02Q .0518, will run concurrently with public participation period (30-day), as specified per DAQ's agreement with 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 is provided to the public under 02Q .0521.

XI. Conclusions, Comments, and Recommendations

PE Seal

Pursuant to 15A NCAC 02Q .0112 "Application Requiring a Professional Engineering Seal," 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 Rule .0103 of this Section that involve:

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

A professional engineer's seal (PE Seal) was not required for this renewal.

Zoning

A zoning consistency determination was not required for this renewal.

Recommendations

WSRO recommends issuance of the permit and was sent a DRAFT permit prior to issuance (See Section III of this document for a discussion).

The Raleigh Central Office (RCO) recommends issuance of Air Permit No. 08823T15.