NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Wilmington Regional Office
County: New Hanover
NC Facility ID: 6500261
Inspector's Name: Jmanda Dunston
Date of Last Inspection: 01/15/2020
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): CTI of North Carolina, Inc

Facility Address:
CTI of North Carolina, Inc
1002 South Front Street
Wilmington, NC 28401

SIC: 4226 / Special Warehousing & Storage
NAICS: 49311 / General Warehousing and Storage

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

Permit Applicability (this application only)

SIP:
NSPS: Subpart Kb
NESHAP: Subpart JJJJJJ
PSD:
PSD Avoidance:
NC Toxics:
112(r):
Other:

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Tom Dolan Senior EHS Specialist (912) 236-1331 PO Box 576 Savannah, GA 31402+0576	T. Pratt Summers Vice President, Operations (912) 236-1331 PO Box 576 Savannah, GA 31402	Tom Dolan Senior EHS Specialist (912) 236-1331 PO Box 576 Savannah, GA 31402+0576

Application Data

Application Number: 6500261.18A
Date Received: 06/05/2018
Application Type: Renewal
Application Schedule: TV- Renewal

Existing Permit Data
Existing Permit Number: 05870/T18
Existing Permit Issue Date: 01/29/2021
Existing Permit Expiration Date: 12/31/2025

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2019	---	0.3100	17.16	0.32	0.02	4.60	4.08 [Methanol (methyl alcohol)]
2018	---	0.3800	17.32	0.1700	0.0200	4.73	4.15 [Methanol (methyl alcohol)]
2017	---	0.2000	15.72	0.1700	0.0200	4.74	4.15 [Methanol (methyl alcohol)]
2016	----	0.0800	15.55	0.0700	0.0100	4.79	4.19 [Methanol (methyl alcohol)]
2015	---	0.0600	18.79	0.0500	---	6.50	5.67 [Methanol (methyl alcohol)]

Review Engineer: J'manda Dunston

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

Comments / Recommendations:
Issue 05870/T19
Permit Issue Date:
Permit Expiration Date: December 31, 2025

I. Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (05870T18) was issued on January 29, 2021. The renewal application was received on June 5, 2018 or at least nine 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.

II. Facility Description

CTI of North Carolina, Inc. (CTI) stores and distributes bulk liquid products such as, but not limited to, gasoline, diesel fuel, fuel oil, and organic and inorganic chemicals. Products are shipped and received via rail, truck, ship, and barge, and are stored in tanks.

III. History/Background/Application Chronology

March 14, 2014	Title V permit renewal issued. Air permit No. 05870T17 was issued on March 14, 2014 with an expiration date of February 28, 2019.
June 5, 2018	DAQ received renewal application (No. 6500261.18A).
July 28, 2020	DAQ-WiRO submitted a draft permit renewal to RCO for review.
August 20, 2020	RCO provided comments to WiRO.
December 8, 2020	DAQ-WiRO submitted an updated draft permit renewal to RCO for review. RCO provided comments via email on **September 9, 2020**. The requests were minor changes and corrections were made to the permit.
January 19, 2021	WiRO submitted an updated draft permit renewal to RCO for review. RCO provided comments via email on **January 20, 2021**. The 15A NCAC 02D .1111 MAXMUM ACHIEVABLE CONTROL TECHNOLOGY permit condition was replaced with an avoidance condition, which requires CTI to keep records of the amount of time when the boilers are burning fuel oil. All conditions were updated to the most recent revisions of the regulations. The table of materials stored and loaded at CTI was updated.
January 29, 2021	Title V administrative amendment permit issued. Air permit No. 05870T18 was issued on January 29, 2021 with an expiration date of December 31, 2025.
March 2, 2021	WiRO submitted an updated draft permit renewal to RCO for review. RCO provided comments via email. Minor changes and corrections were made to the permit.
March 8, 2021	WiRO submitted a draft permit renewal to CTI for review.
March 16, 2021	CTI provided comments via email. Minor changes and corrections were made to the permit.
June 2, 2021	Proposed permit sent to public notice.

IV. Changes to Existing Permit

The following table provides summary of changes made to existing permit

Page No.	Section	Description of Changes
Cover and throughout	Throughout	Updated all tables, dates, and permit revision numbers.
Throughout	Throughout	Added noncompliance statements. Updated using current permit shell language.
3	Insignificant Activities List	Added fixed roof castor oil storage tanks 201 and 201 (ID Nos. IES201 & IES202). Moved floating roof ethanol storage tank 226 (ID No. IES8) from insignificant activities list to the Section 1 Table of Emission Sources as an internal floating roof tank (ID No. 226).
4	Table of Emissions Sources	Added internal floating roof tank 226 (ID No. 226).
5	2.1.A	Updated 15A NCAC 02D .1111 to 15A NCAC 02Q .0317: Avoidance Condition for 15A NCAC 02D .1111: Maximum Achievable Control Technology to the table for boilers (ES-ID Nos. WIL1 & WIL2)
6	2.1.A.5	Updated 15A NCAC 02D .1111 to 15A NCAC 02Q .0317: Avoidance Condition for 15A NCAC 02D .1111: Maximum Achievable Control Technology
7	2.1.B	Added tanks 117 and 226 to the internal floating roof list and to the applicable conditions in the table.
7-10	2.1.B.1	Added tank 226 to applicable conditions.
7-10	2.1.B.1	Update NSPS rule to the most recent revision of the rule.
11	2.1.B.4	Added most recent revision of condition 15A NCAC 02D .0927.
12	2.1.C	Added TLR2 and RLR to condition 15A NCAC 02D .0927 in the table.
12	2.1.C.1	Added TLR2 and RLR to condition 15A NCAC 02D .0927.
13	2.1.C.2	Update condition 15A NCAC 02D .0932 to the most recent revision of rule.
18	2.2.A.3.c-d	Updated the conditions with the most recent revisions.
19	2.2A.3.h	Added additional regulation for scrubber (ID No. SC01).
23-25	2.2.A.5	Added 15A NCAC 02D .0614.

V. Statement of Compliance

CTI was last inspected on January 15, 2020 by Ms. J'manda Dunston of the Wilmington Regional Office (WiRO). According to the inspection report, the facility appeared to be complying with all regulations and permit requirements at the time of inspection.

Regarding the five-year compliance history, the inspection report notes that CTI was issued a NOD on October 3, 2017 for failing to adequately record the changes made of miscellaneous volatile organic compounds in a tank. No other violations were identified during this time period.

VI. Regulatory Review for State Regulations

The Permittee is subject to the following regulations:

- 15A NCAC 02D .0503, Particulates from Fuel Burning Indirect Heat Exchangers

  Boilers Nos. 1 and 2 **(ID Nos. WIL1 and WIL2)** are subject to 02D .0503 since fuel oil and natural gas are burned for the primary purpose of producing heat by indirect heat transfer. The application states that WIL2 is rated at 1.7 MMBtu/hr and its allowable emissions of particulate matter from fuel combustion are limited to 0.60 lb/MMBtu. WIL1 is rated at 14.7 MMBtu/hr and therefore its allowable emissions of particulate matter from fuel oil combustion are limited to 0.54 lb/MMBtu. The combustions of No. 2 fuel oil and/or natural gas are expected to demonstrate compliance with 02D .0503 and therefore there are no monitoring, recordkeeping, and reporting requirements.

- 15A NCAC 02D .0516, Sulfur Dioxide Emissions from Combustion Sources

  Boilers Nos. 1 and 2 (**ID Nos. WIL1 and WIL2**) are a source of sulfur dioxide emissions from combustion, which discharges through a stack and therefore are subject to 02D .0516(a). Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Boilers Nos. 1 and 2 (**ID Nos. WIL1 and WIL2**) are not subject to another sulfur dioxide standard. Both units comply by limiting the sulfur content of the fuel combusted. Therefore, there are no monitoring, recordkeeping, and reporting requirements because the emissions of sulfur dioxide for the combustion of No. 2 fuel oil and/or natural gas will always be less than the allowable emission limit.

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

  This rule applies to all fuel burning sources and to other industrial processes having visible emissions. Visible emissions from Boilers Nos. 1 and 2 (**ID Nos. WIL1 and WIL2**) shall not be more than 20% opacity when averaged over six-minute period. However, six-minute averaging periods may exceed 20% opacity not more than once in any hour nor more than four times in any 24-hour period. In no event shall the six-minute average exceed 87% opacity. The combustions of No. 2 fuel oil and/or natural gas are expected to demonstrate compliance with 02D .0521 and therefore there are no monitoring, recordkeeping, or reporting requirements.

- 15A NCAC 02D .0402, Sulfur Oxides

  Boilers Nos. 1 and 2 (**ID Nos. WIL1 and WIL2**) are permitted to combust No. 2 fuel oil and therefore are subject to 02D .0402. The fuel oil that is combusted in the boilers shall not contain greater than 500 ppm sulfur, by weight. The Permittee shall maintain records of each shipment of fuel oil received indicating the sulfur content of the fuel oil combusted in the boilers.

- 15A NCAC 02Q .0317, Avoidance Conditions for 15A NCAC 02D .1111: Maximum Achievable Control Technology

  This regulation applies to Boilers Nos. 1 and 2 (**ID Nos. WIL1 & WIL2)**. In order to avoid applicability of this regulation, the Permittee shall burn gaseous fuels not combined with any solid fuels and burn liquid fuel only during periods of gas curtailment, gas supply interruption, startups, for periodic testing, maintenance, or operator training on liquid fuel. Also, periodic testing, maintenance or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year. In order to demonstrate compliance with this regulation, the Permittee shall maintain the records of the total number of hours per calendar year No. 2 fuel oil is burned in the boilers during periodic testing, maintenance, or operator training on liquid fuel and submit a notification to the Regional Office within 10 days of exceeding 48 hours of burning No. 2 fuel oil in the boilers. These records shall be maintained in a logbook (written or electronic) on-site and made available to an authorized representative upon request.

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

  As per 40 CFR 60.110(a), this regulation applies to "storage vessels with a capacity greater than or equal to 75 cubic meters (m^3)(20,000 gallons) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984." This regulation will not apply to storage

vessels that have a capacity greater than or equal to 40,000 gallons storing a liquid with a maximum true vapor pressure (TVP) less than 0.508 psia, storage vessels that have a capacity greater than 20,000 gallons but less than 40,000 storing a liquid with a maximum TVP less than 2.18 psia, or storage vessels with a capacity less than or equal to 420,000 gallons used for petroleum or condensate stored, processed or treated prior to custody transfer. The Permittee shall not store VOLs with a maximum TVP greater than or equal to 11.1 psia in the storage vessels with a capacity greater than or equal to 20,000 gallons (**ID Nos. 212, 213, 214, 215,216, 217, 218, 219, 220, 222, 225, and 226**).

For storage vessels with a capacity greater than or equal to 40,000 gallons containing a VOL with an as-stored maximum TVP equal to or greater than 0.754 psia but less than 11.1 psia (**ID Nos. 212, 213, 214, 215, 225, and 226**) or storage vessels with a capacity greater than or equal to 20,000 gallons but less than 40,000 gallons containing VOL with an as-stored maximum TVP equal to or greater than 4.00 psia but less than 11.1 psia (**ID Nos. 216, 217, 218, 219, 220, 222, 223, and 224**), the permittee shall equip the vessel with an internal floating roof. The Permittee shall follow the specifications for the internal floating roof tank as listed in the permit under Section 2.1.B.1.c.

Tank 226 is requested to be added to the group of internal floating roof storage tanks subject to Subpart Kb. This tank was installed in 2008 and CTI previously requested for this tank be added to the insignificant source list since it was storing ethanol and emissions were less than 5 tpy for VOC. The tank will comply with Subpart Kb's applicable VOC standard specified in 40 CFR 60.112b(c). The tank complies with that standard by an internal floating roof as specified in that Subpart. These requirements are specified in Section 2.1.B.1.c of the permit. The applicant will also follow the testing procedures specified in 40 CFR 60.113b and specified in Section 2.1.B.1.d thorough 2.1.B.1.h. The monitoring (40 CFR 60.116b), reporting, and recordkeeping requirements (40 CFR 60.115b) are specified in Section 2.1.B.1.i through 2.1.B.1.o of the permit.

- 15A NCAC0 2D .0949, Storage of Miscellaneous Volatile Organic Compounds

  This Rule applies to the storage of volatile organic compounds with a vapor pressure of 1.5 psia or greater under actual storage conditions in stationary tanks, reservoirs, or other containers with a capacity greater than 50,000 gallons. Thus, tanks 203, 205, 207, 208, 209, 210, 211, 21, 214, 215, 225, and 226 are subject to this regulation. The restrictions for a storage vessel as outlined in 02D .0949(b) are outlined in Section 2.1.B.2.a of the permit. The tanks will follow the monitoring and recordkeeping requirements specified in Section 2.1.B.2.b of the permit. The are no reporting requirements for these sources.

- 15A NCAC 02D .0925 Petroleum Liquid Storage in Fixed Roof Tanks (*Note: This regulation only applies to tank **ID No. 117** if gasoline is stored in the tank and it has been retrofitted with a self-supporting roof)*

  This regulation applies to all fixed roof storage vessels with capacities greater than 39,000 gallons containing volatile petroleum liquids whose true vapor pressure is greater than 1.52 pounds per square inch absolute (psia). Tanks meeting these criteria may not be used unless they are retrofitted with an internal floating roof meeting the specifications in .0925(d). Tank 117 is currently used to store fuel oil; however, it is permitted to store gasoline.

  Per the permitting history of CTI, the facility had three fixed roof tanks greater 39,000 gallons (ES-ID Nos. 114, 115, and 117) that were permitted to store volatile petroleum liquids. However, tank 114 moved to the insignificant activities list and tank 115 was dismantled January 17, 2011. Tank 117 is the only fixed roof tank is 2,024,316 gallons in capacity and the true vapor pressure of gasoline is 6.5 psia and therefore, permitted to store volatile petroleum liquids.

  Gasoline shall not be stored in a storage vessel (**ID No. 117)** unless each storage vessel has been retrofitted with an internal floating roof equipped with a closure seal to close the space between the roof edge and tank wall, all openings, except stub drains are equipped with covers, lids, or seals, each storage vessel is maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials. All covers, lids, or seals shall be in the closed position at all times except when in actual use. Automatic bleeder vents are closed at all times except when the roof is floated off or landed on the roof leg supports. Rim vents, if provided, re set to open when the roof is being floated off the leg supports or at the manufacturer's recommended setting.

A routine visual inspection shall be conducted through roof hatches once per month. Also, a complete inspection of the floating roof and seal shall be conducted whenever the tank is emptied for maintenance, shell inspection, cleaning, or for other non-operational reasons or whenever excessive vapor leakage. The Permittee shall maintain a logbook (written or electronically) of the results of the required inspections, average monthly temperature, true vapor pressure of petroleum liquids stored, and the throughput quantities and types of petroleum liquids stored. The Permittee shall submit a summary report of the monitoring and recordkeeping activities semiannually.

- 15A NCAC 02D .0927 Bulk Gasoline Terminals (*Note: This regulation only applies to tank **ID No. 117** if gasoline is stored and to tank truck loading rack **ID No. TLR1** when loading gasoline*)

  This regulation limits VOC emissions from the storage bulk gasoline terminals and their loading of tanker truck or trailer compartments. The facility is subject to this regulation as a bulk gasoline terminal under Regulation .0927 as it receives gasoline primarily by ship or barge; delivers gasoline to gasoline plants, commercial, and retail accounts by tank truck, and may have average daily throughput of more than 20,000 gallons of gasoline. As the facility handles non-gasoline materials as well, the regulation has been interpreted to apply only to tanks and loadout activities only when in gasoline service.

  Loading of gasoline into tank trucks must be controlled by a vapor control system that limits VOC emissions to 35 mg/L, displaced vapors are vented only to the vapor control system or a flare, liquid drainage from the loading device is prevented when it is not in use by a work practice or mechanical device, and all loading and vapor lines are equipped with fittings for vapor-tight connections and are automatically and immediately closed when disconnected. The tank truck or trailer must have been certified and documented leak-tight in the previous 12 months in accordance with Rule 02D .0932. Emissions from degassing must be collected and controlled with at least 90% efficiency. The vapor collection and control system must be visually inspected for leaks on each day that the terminal is manned and open for business. The same sources must also be inspected weekly using sight, sound, smell a meter for VOC, or an explosimeter. A monthly inspection must be conducted using a meter for VOC or an explosimeter. Leaks detected from these inspections must be documented. Leaks in vapor collection hoses that connect to tank trucks or trailers must be repaired prior to being used again, and all other leaks must be repaired as expeditiously as possible and within 15 days or taken out of service at 15 days after the leak was detected.

  Tanks storing gasoline must be equipped with rim-mounted secondary seals on all internal floating roof tanks, gaskets on tank fittings, floats in slotted guide poles, and gaskets around the cover slotted guide poles. All tanks used for gasoline shall be painted white or silver. The Permittee shall perform monthly inspections and perform maintenance on the tanks storing gasoline as recommended by the manufacturer. The Permittee shall maintain a logbook (written or electronic) of the results of the required inspection and any maintenance performed on the tanks. The Permittee shall submit a summary report of the monitoring and recordkeeping activities semiannually.

  Both gasoline loadout and storage tanks may not allow gasoline to be discarded in sewers or handled in any manner that would result in evaporation or allow the pressure in the vapor collection system to exceed the relief valve settings for the tank truck or trailer. Compliance with these requirements will be required before gasoline is stored in the tanks.

- 15A NCAC 02D .0932 Gasoline Tank Trucks and Vapor Collection Systems (*Note: This regulation only applies to tank truck loading rack **ID No. TLR1** when loading gasoline*)

  This regulation limits VOC emissions for sources that store, transport, and dispense gasoline. It is applicable statewide to gasoline tank trucks and bulk gasoline terminals, and therefore applies to the facility when it handles gasoline.

  Gasoline tank trucks must be tested and certified leak-tight annually by a gasoline tank testing facility. The gasoline tank truck shall not be used unless it is certified leak tight. Liquid leaks are not permitted, any tank truck with a leak equal to or greater than 100 percent of the lower explosive limit, as detected by a combustible

gas detector using the test procedure in 15A NCAC 02D .2615, shall not be used beyond 15 days after the leak has been discovered unless the leak has been repaired and the tank has been certified to be leak tight.

The Permittee shall maintain records of all leak testing and repairs. A copy of the most recent leak testing report shall be kept with the gasoline tank truck. The Permittee shall also file a copy of the most recent leak testing report with each bulk gasoline terminal that loads the gasoline tank truck.

Vapor collection systems must be designed and operated to prevent gauge pressure in the tanks being filled from exceeding a pressure of 18 inches of water and toe prevent a vacuum of greater than 6 inches of water. During loading and unloading operations of gasoline, there may be no liquid leaks, and no vapor leakage equal to or greater than 100 percent of the lower explosive limit at a distance of one inch around the perimeter of each potential leak source. Leaks must be repaired within 15 days. If more than 15 days are required to make the repair, the reasons that the repair cannot be made shall be documented, and the leaking equipment shall not be used after the fifteenth day from when the leak detection was found until the repair is made. The vapor collection system must be tested at least annually according to Rule 02D .0912. Records of all certification testing and repairs of the vapor collection system must be retained. Certification records for each tanker truck or trailer filled must be retained for at least two years. Compliance with these requirements will be required before gasoline is stored in the tanks.

- 15A NCAC0 2D .0948, VOC Emissions from Transfer Operations (*Note: This regulation only applies to the railcar loading rack **ID No. RLR**, and two tank truck loading rack **ID Nos. TLR1 and TLR2** when loading volatile organic compounds other than gasoline*)

  The owner or operator to which this Rule applies shall not load in any one day more than 20,000 gallons of any volatile organic compound with a vapor pressure of 1.5 pounds per square inch absolute or greater under actual conditions into any tank-truck, trailer, or railroad tank car from any loading operation unless the loading operation uses submerged loading through boom loaders that extend down into the compartment being loaded or by others methods that are at least as efficient based on source testing or engineering calculations. Therefore, this regulation applies to TLR1, TLR2, and RLR when loading VOC liquids other than gasoline with vapor pressures and throughputs exceeding this specification. There are no monitoring, recordkeeping, or reporting requirements.

- 15A NCAC 02D .1100, Control of Toxic Air Pollutants

  This Rule applies to all facility-wide emission sources that emit a toxic air pollutant. The restrictions for these emission sources are outlined in Section 2.2A.1 of the permit. The emission sources will follow the recordkeeping requirements specified in Section 2.2.A.1 of the permit.

- 15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions

  This regulation requires implementation of management practices or control equipment as necessary to prevent odorous emissions from subject facilities from causing or contributing to objectionable odors beyond the property's boundary. While terminals of this type have the potential to create objectionable odors, the Wilmington facility's installation of emission control equipment for other purposes, in conjunction with good management practices, prevents creation of objectionable off-property odors. Therefore, the facility is in compliance with this requirement.

- 15A NCAC 02Q .0317, Avoidance Conditions for 15A NCAC 02D .1111: Maximum Achievable Control Technology

  The facility is a minor source for the emissions of HAPs and to ensure this facility remains a minor source and avoid any MACTs the facility wide emissions shall be less than 10 tons per year of each HAP and 25 tons per year of all HAPs, as stipulated in Section 2.2.A.3 of the permit. As part of the permit requirements the applicant shall calculate monthly individual HAP emissions from this internal floating roof tank.

As noted in J'manda Dunston's January 15, 2020 inspection report, "the packed bed scrubber **(ID No. SC01)** that is used to control the methanol emissions from the marine loading rack **(ID No. MLR)** was taken out of service and dismantled in 2013." Therefore, if the packed bed scrubber is taken out of service, the Permittee must inspect the scrubber and ensure that it is in good working condition before putting the scrubber back into service. The Permittee shall maintain records of the amount of HAP-containing liquids processed or stored in each loading rack or tank, the molecular weight of each HAP processed or stored on site, operating hours of the control device **(ID Nos. ZTOF01 and SC01)** and the volatile organic liquids loaded during those hours of operation for the loading racks that they control, the flow rate of water through the packed bed scrubber **(ID No. SC01)** during operational hours, the control efficiency and operating parameters determined during testing and approved by DAQ, that are required to maintain the control efficiency for each HAP controlled at the marine terminal by the packed be scrubber, and each HAP loaded at the marine terminal, the periods they were loaded, and the required scrubber operating parameters during each of the periods of loading.

The permittee shall submit a semiannual summary report that contains the HAP emissions from each truck loading rack **(ID Nos. TLR1 and TLR2)**, marine loading rack **(ID No. MLR)**, and railcar loading rack **(ID No. RLR)** for each month during the semiannual period and for each 12-month period ending on each month during the semiannual period using a 12-month rolling total. The report shall also contain the HAP emissions from each internal floating roof tank and each fixed roof tank for each month during the semiannual period and for each 12-month period ending on each month during the semiannual period using a 12-month rolling total. Lastly, the report should contain the total individual and total combined HAP emissions for each HAP and combination of HAPs for each month during the semiannual period and for each 12-month period ending on each month during the semiannual period using a 12-month rolling total.

- 15A NCAC 02Q .0317, Avoidance Conditions for 15A NCAC 02D .0530: Prevention of Significant Deterioration

  This regulation applies to all facility-wide emission sources. In order to avoid the applicability of this regulation, the facility-wide emission sources shall not discharge into the atmosphere less than 249 tons of COCs per consecutive 12-month period. In order to demonstrate compliance with this regulation, VOC emissions shall be controlled by the vapor combustion unit (**ID No. ZTOF01**) and methanol emissions shall be controlled by the packed bed scrubber (**ID No. SC01**). The Permittee will follow monitoring, recordkeeping, and reporting requirements specified in Section 2.2.A.4.g through 2.2.A.4.k.

VII. Regulatory Review for Federal Regulations (NSPS, NESHAPS/MACT, PSD, 122(r), CAM)

NSPS – Fourteen of the facility's storage tanks (**ID Nos. 212 through 220 and 222 through 226**) are each subject to the "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984" (40 CFR 60, Subpart Kb). The Subpart applies to each storage vessel with a capacity greater than or equal to 20,000 gallons that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984. The table below lists the material that the tanks typically store. The Permittee shall comply with all applicable provisions, including the notifications, testing, monitoring, recordkeeping, and reporting requirements. This permit renewal does not affect this status.

Table 1: List of Toxic Air Pollutant Materials that may be loaded or stored at CTI of North Carolina

Substance Name	CAS Number	TAP
Acetic Acid	64-19-7	Y
Ethyl Acetate	141-78-6	Y
Ethylenediamine	107-15-3	Y
Glycol Ethers	GLYCOL ETHERS	Y
Hexane	110-54-3	Y
Methyl Ethyl Ketone	78-93-3	Y
Methyl Isobutyl Ketone	108-10-1	Y

Styrene	100-42-5	Y
Sulfuric Acid	7664-93-9	Y
Toluene	108-88-3	Y
Xylene	1330-20-7	Y

NESHAPS/MACT – The facility currently operates under a MACT Avoidance condition limiting emissions of any single HAP to less than 10 tons per year and any combination of HAPs to less than 25 tons per year in order to avoid applicability of 40 CFR 63, Subparts EEEE – Organic Liquid Distribution; R – Gasoline Distribution; and DDDDD – Combustion MACT.

A MACT Avoidance condition was added to the permit to limit the amount of No. 2 fuel oil burned in Boilers Nos. 1 and 2 **(ID Nos. WIL1 and WIL2)** in order to avoid applicability of 40 CFR 63, Subpart JJJJJJ – NESHAP for Boilers Area Sources.

PSD – The facility currently operates under a PSD Avoidance condition limiting emissions of facility-wide volatile organic compound emissions to less than 249 tons per year. Per the 2019 Emissions Inventory, the facility reported VOC emissions to be 17.16 tons. This shows that CTI is complying with the PSD Avoidance. The permit stipulation required that testing be completed for collection and destruction efficiencies of both the vapor combustor (**ID No. ZTOF1**) installed on the tank truck loading rack (**ID No. TRL1**) and railcar loading rack (**ID No. RLR**) and scrubber (**ID No. SC01**) installed on the marine loading rack (**ID No. MLR**) for each HAP that may be loaded at the facility before any control efficiency can be claimed. Initial testing on the vapor combustor (**ID No. ZTOF01**) and scrubber (**ID No. SC01**) was performed on July 10, 2008. The vapor combustor (**ID No. ZTOF01**) was approved by DAQ on September 24, 2007 and the scrubber **(ID No. SC01**) was approved by DAQ on August 20, 2009**.** The actual control efficiency (CE) obtained during the January 2018 test for the vapor combustor (**ID No. ZTOF1**) is 98.7%. According to the most recent inspection report by J'manda Dunston, "The scrubber has been dismantled and placed in storage in order to accommodate the loading dock modifications." However, the actual control efficiency (CE) obtained during the July 2008 test for the scrubber (**ID No. SC01**) 97.43%.

The Permittee shall conduct a destruction efficiency performance test on the vapor combustor (**ID No. ZTOF1**) to determine the percent reduction of volatile organic compound emissions once per each 5-year permit term. The actual destruction efficiency obtained during the January 2018 test for the vapor combustor (**ID No. ZTOF1**) is 99.8%. In addition, monitoring, recordkeeping, and reporting is required. This permit renewal does not affect this status.

112(r) – I reached out to Tom Dolan, Senior EHS Specialist at CTI, and he confirmed that the facility does not store Ethylenediamine, which is the only permitted compound that is subject to 112(r). Therefore, the facility is not currently subject to the requirements of this Section. No modification is required as part of the permit process.

CAM – Per 40 CFR 64 and 15A NCAC 02D .0614, the gasoline tank truck loading rack emissions shall not exceed 35mg of VOC per liter of gasoline loaded when using the tank truck loading rack (**ID No. TLR1**) and vapor combustion unit (**ID No. ZTOF01**). The key elements of the monitoring approach for VOCs from the loading of gasoline in these sources including parameter to be monitored, parameter ranges, and performance criteria are presented in the following table:

Control Device ID No. ZTOF01	**Indicator**
I. Indicator Measurement Approach	Presence of pilot light flame. The presence of a pilot light flame on the flare during loading operations associated with TLR1 will be monitored continuously while loading gasoline using a UV beam detector. Monitoring points are located to provide and accurate detection of the pilot light flame.
II. Indicator Range	The indicator level is when the pilot light flame is not detected during loading operations.

QIP Threshold	The QIP threshold level is when the absence of flame is detected more than ten times in a six-month period during gasoline loading operations.
III. Performance Criteria	
Data Representativeness	The UV beam detector is located at the pilot light in accordance with manufacturer's recommendations.
Verification of Operational Status	NA
QA/QC Practices	The UV beam detector is calibrated in accordance with company procedures, consistent with manufacturer recommendations or acceptable engineering practices.
Monitoring Frequency	Continuous during gasoline loading operations.
Data Collection Procedures	The presence of the pilot light flame is continuously measured by the UV flame detector and recorded by PRV data recorder during gasoline loading operations.
Averaging Periods	None

The Permittee shall submit a summary report as described in Section 2.1.C.4.d and 2.2.A.6.d of the permit.

VIII. Facility Wide Air Toxics

The Permittee is currently subject to a State-enforceable only permit condition for the control of air toxics facility-wide. Specifically, emissions of ethyl acetate, MEK, and MIBK are subject to one- and 24-hour loading rates for the following equipment:

- Truck loading rack No. 1 **(ID No. TLR1)**
- Truck loading rack No. 2 **(ID No. TLR2)**
- Railcar loading rack **(ID No. RLR)**
- Simultaneous operation of **TLR1 and RLR**
- Simultaneous operation of **TLR2 and RLR**
- Internal Floating Roof Tanks **(ID No. IFR Tanks; 203-211, 213, 215, 219-220, and 226)**, and
- Fixed Tanks **(ID No. FR Tanks; 216-218, and 221-224)**.

The Permittee is only allowed to store liquids that are included in the list above. All other liquids allowed to be stored are inorganic liquids and volatile organic liquids (VOL) that are not TAP. The Permittee is required to maintain daily and annual records of the operational information to determine compliance with 15A NCAC 2D .1100. No modifications are necessary as part of this permit action; continued compliance is expected.

IX. Facility Emissions Review

X. 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 is provided to the public under 15A NCAC 02Q .0521 above.

The Commonwealth of Virginia is an affected area within approximately 50 miles of the facility.

Notice of the DRAFT Title V Permit to Affected States ran from XXXX YY, 2021, to XXXX YY, 2021. Summarize comments from Affected States.

Public Notice of the DRAFT Title V Permit ran from XXXX YY, 2021, to XXXX YY, 2021. Summarize public comments.

EPA's 45-day review period ran concurrent with the 30-day Public Notice, from XXXX YY, 2020, to XXXX YY, 2020. Summarize comments from EPA and U.S. EPA Region 4 regarding the DRAFT Title V Permit.

XI. Conclusions, Comments, and Recommendations

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 per 02Q .0304(b) was NOT required for the Permit Application No. 5900069.20B because there was no construction involved with this permit renewal.

Recommendations

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

WiRO wrote the permit and Central Office received a copy of this permit and submitted comments that were incorporated as described in Section VII.

Recommend Issuance of Permit No. 05870T19.