NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date:

Region: Winston-Salem Regional Office
County: Guilford
NC Facility ID: 4100295
Inspector's Name: Mohammad Khan
Date of Last Inspection: 04/25/2023
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Kinder Morgan Southeast Terminals LLC- Greensboro 1 Terminal

Facility Address:
Kinder Morgan Southeast Terminals LLC- Greensboro 1 Terminal
6907 West Market Street
Greensboro, NC 27409

SIC: 4226 / Special Warehousing & Storage
NAICS: 49319 / Other 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: 02D .0925, .0927, .0932, .2615
NSPS: Subpart Kb, XX
NESHAP: GACT BBBBBB
PSD: NA
PSD Avoidance: 02Q. 0317
NC Toxics: NA
112(r): 02D .2100
Other: 02D .1806

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Demond Cushingberry Superintendent (336) 254-6626 6907 West Market Street Greensboro, NC 27409	Wayne Harvey Manager of Operations (770) 751-4005 1000 Windward Concourse, Suite 450 Alpharetta, GA 30005	Johnny Tapia OSG Air Support Specialist (704) 249-9936 502 Tom Sadler Road Charlotte, NC 28214

Application Data

Application Number: 4100295.22A, 4100295.22B
Date Received: 12/15/2022, 12/16/2022
Application Type: Renewal, 502(b)(10) change
Application Schedule: TV-Renewal

Existing Permit Data
Existing Permit Number: 04739/T24
Existing Permit Issue Date: 11/08/2021
Existing Permit Expiration Date: 06/30/2023

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2021	0.0300	4.21	35.54	3.53	0.3200	1.60	0.4210 [Xylene (mixed isomers)]
2020	0.0300	4.40	35.88	3.70	0.3300	1.52	0.3919 [Xylene (mixed isomers)]
2019	0.0300	4.91	36.69	4.12	0.3700	1.44	0.4355 [Xylene (mixed isomers)]
2018	0.0200	4.31	37.28	4.24	0.3200	1.42	0.3989 [Xylene (mixed isomers)]
2017	0.0300	4.73	32.33	4.74	0.3400	1.32	0.2736 [Xylene (mixed isomers)]

Review Engineer: Eric L. Crump, P.E.

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

Comments / Recommendations:
Issue 04739/T25
Permit Issue Date:
Permit Expiration Date:

1. Purpose of Application

Kinder Morgan Southeast Terminals LLC- Greensboro 1 Terminal (hereinafter referred to as Kinder Morgan) is a fuel distribution terminal located in Greensboro, Guilford County, North Carolina. The facility currently operates under Title V Permit No. 04739T24 with an expiration date of June 30, 2023. Kinder Morgan has applied for renewal of their Title V air quality permit. The renewal application was received on December 15, 2022, or at least six months prior to the expiration date as required by General Condition 3.K of the current permit. 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.

Kinder Morgan did not report the addition, removal, or modification of any sources at the facility in permit renewal application No. 4100295.22A. However, this permit renewal also incorporates application No. 4100295.22B, which is a Section 502(10)(b) permit change, received on December 7, 2022. This change is for the installation of two new loading arms--one for Lane 4 and one for Lane 5—at the Greensboro 1 loading rack, along with related rail spurs, pumps, piping, and safety equipment.

2. Facility Description

Kinder Morgan is a fuel distribution terminal that receives gasoline and diesel through two incoming pipelines from Products (SE) Pipeline Corporation. The terminal operates 24 hours a day, seven days per week, and 52 weeks per year. Product received from the pipelines is stored in tanks and is loaded onto trucks at the loading rack for distribution to gasoline/diesel dispensing facilities. Ethanol arriving by trucks is offloaded at the facility for storage, processing, and blending into product. The facility also receives transmix (a mixture of gasoline, diesel, and jet fuel created when the pipeline switches products) from the Corporation by truck or pipeline. The transmix components can be separated out by an onsite process heater and distillation system. Transmix can also be piped off site via two outgoing pipelines.

The facility has a dual-bed activated carbon adsorber vapor recovery unit (VRU-1) for controlling vapors displaced during loading. While one bed is actively adsorbing the gas stream, the other bed is regenerating. The facility also has a portable vapor combustion unit (VCU-1) listed as a control device for the loading rack (LR-1). The unit is intended as a backup for the vapor recovery unit but as of now has not yet been installed or tested.

3. Application Chronology

July 17, 2018	Division of Air Quality (DAQ) issues Permit No. 04739T21 to Kinder Morgan as a first-time Title V permit (the facility had previously been permitted as a synthetic minor source).
January 25, 2021	DAQ receives Application No. 4100295.21A from Kinder Morgan for an administrative amendment to revise permit language to reflect regulation changes (specifically 15A NCAC 02D .0932 and 02D .2615) affecting gasoline cargo tank trucks and vapor collection systems.
January 29, 2021	DAQ issues Permit No. 04739T22 to Kinder Morgan as an administrative amendment.
April 29, 2021	DAQ receives Application No. 4100295.21B from Kinder Morgan for a minor modification to change the top of tank TK-3 from external geodesic dome to a fixed roof.

May 4, 2021	DAQ sends letter to Kinder Morgan acknowledging receipt of application. Kinder Morgan may implement the proposed minor modification under 15A NCAC 02Q .0515 if they comply with both the applicable requirements governing the change(s) and the proposed permit terms and monitoring, recordkeeping, and reporting conditions identified in the application.
June 24, 2021	DAQ issues Permit No. 04739T23 to Kinder Morgan as a minor modification to change the top of tank TK-3 from external geodesic dome to a fixed roof.
August 24, 2021	DAQ receives Application No. 4100295.21B from Kinder Morgan for a minor modification to add a portable vapor combustion unit (VCU-1) as a backup control device for the loading rack and blending system (LR-1).
September 15, 2021	DAQ sends letter to Kinder Morgan acknowledging receipt of application. Kinder Morgan may implement the proposed minor modification under 15A NCAC 2Q .0515 if they comply with both the applicable requirements governing the change(s) and the proposed permit terms and monitoring, recordkeeping, and reporting conditions identified in the application.
November 8, 2021	DAQ issues Permit No. 04739T24 to Kinder Morgan as a minor modification to add a portable vapor combustion unit (VCU-1) as a backup control device for the loading rack and blending system (LR-1).
December 7, 2022	DAQ receives 502(b)(10) notification from Kinder Morgan for the addition of two loading arms at the loading rack (LR-1)—one at Lane 4 and one at Lane 5.
December 15, 2022	DAQ receives permit renewal application No. 4100295.22A from Kinder-Morgan.
December 16, 2022	DAQ assigns Application No. 4100295.22B to the 502(b)(10) notification received from Kinder Morgan on December 7, 2022.
August 17, 2023	Draft permit and review sent for DAQ supervisory review.
August 24, 2023	DAQ supervisor provides comments on draft permit and review
September 13, 2023	DAQ sends draft permit to Kinder Morgan, Stationary Source Compliance Branch (SSCB) and Winston-Salem Regional Office (WSRO) for review and comment.
September 20, 2023	DAQ receives comments on draft permit from SSCB.
September 21, 2023	DAQ receives comments on draft permit from Kinder Morgan.
September 22, 2023	DAQ receives comments on draft permit from WSRO.
xxx	Permit renewal notice published, 30-day public notice and comment period begins, and 45-day EPA comment period begins.
xxx	30-day public notice and comment period ends.

xxx 45-day EPA comment period ends.

4. Changes to Permit and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes made to the current Kinder Morgan permit in this permit renewal.

Page No.	Section	Description of Changes
Cover and throughout	---	• Updated all dates and permit revision numbers • Updated all limits/standards summary tables to current standard format • All citations of the Code of Federal Regulations (CFR) where necessary have been changed to include Title 40 (e.g., from "CFR 60.XXX" to "40 CFR 60.XXX")
Insignificant Activities List	Attachment	Moved to Section 3 of permit
2	Table of Contents	• Changed Section 3 from "General Conditions" to "Insignificant Activities per 15A NCAC 02Q .0503(8)" • Added new Section 4, "General Permit Conditions"
3	List of Acronyms	Relocated here (formerly last page of permit)
4	1	• Removed "*" and associated footnote for control device ID No. VCU-1 • Changed number of loading connections in description of loading rack (ID No. LR-1) from twenty-three to twenty-five
5	2.1 A	Changed number of loading connections in description of loading rack (ID No. LR-1) from twenty-three to twenty-five
6	2.1 A.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0524, 40 CFR Part 60, Subpart XX
7	2.1 A.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0927, Bulk Gasoline Terminals
8	2.1 A.3 2.1 A.4	Updated section to reflect the most current stipulations for 15A NCAC 02D .0932, Gasoline Cargo Tank and Vapor Collection Systems Updated section to reflect the most current stipulations for 15A NCAC 02D .2615, Determination of Leak Tightness and Vapor Leaks
10	2.1 B.1	Updated section to reflect the most current stipulations for 15A NCAC 02D .0524, 40 CFR Part 60, Subpart Kb
11	2.1 B.2	Updated section to reflect the most current stipulations for 15A NCAC 02D .0925, Petroleum Liquid Storage in Fixed Roof Tanks
13	2.2 A 2.2 A.1	• Changed number of loading connections in description of loading rack (ID No. LR-1) from twenty-three to twenty-five • Updated limits/standards summary table to current format • Updated section to reflect the most current stipulations for 15A NCAC 02Q. 0317: Avoidance Conditions for 15A NCAC 02D. 0530: Prevention of Significant Deterioration • Grouped all monitoring and recordkeeping requirements in this section under the Monitoring/Recordkeeping heading

Page No.	Section	Description of Changes
15	2.2 A.2	• Updated section to reflect the most current stipulations for 15A NCAC 02D .1111, Maximum Achievable Control Technology, 40 CFR 63 Subpart BBBBBB • Grouped all reporting requirements in this section under the Reporting heading
16	2.2 A.2.d.i	Clarified that the "flare and associated vapor collection system" refers to the portable vapor combustion unit (source ID No. VCU-1)
19	2.3 A.1.b	Updated date for receipt of Risk Management Plan update and due date for next submittal
20	3	Section 3 is now "Insignificant Activities per 15A NCAC 02Q .0503(8)" Removed "**112(r)**" notation from source ID No. IBU-01 *(note: the Section 112(r) requirements in the permit remain unchanged)*
21-28	4	Updated General Conditions to version 7.0 dated August 21, 2023

The following change has been made to the TVEE:

Device ID No.	Original TVEE Description	New Device ID No. (if changed)	New Description
LR-1	One six-position bottom type tank loading rack with twenty-three loading connections and a motor gasoline/denatured ethanol blending system [NSPS XX, GACT BBBBBB]	LR-1	One six-position bottom type tank loading rack with twenty-five loading connections and a motor gasoline/denatured ethanol blending system [NSPS XX, GACT BBBBBB]

5. Description of Changes and Estimated Emissions

As mentioned in Section 1 of this review, Kinder Morgan submitted application No. 4100295.22B, which is a Section 502(10)(b) permit change for the installation of two new loading arms--one for Lane 4 and one for Lane 5—at the Greensboro 1 loading rack, along with related rail spurs, pumps, piping, and safety equipment.

This change does not increase or affect current permit limits (i.e., current PSD avoidance conditions) on the quantity of products passing through the loading rack or to the tanks receiving ethanol from the proposed rail-offload. This change only provides additional operational flexibility and will have no impact on overall emissions at the Kinder Morgan facility. The loading rack will continue to be subject to 40 CFR Part 60 Subpart XX, and Part 63 Subpart BBBBBB, as well as state regulations 15A NCAC 02D. 0927 and 02D .2615, as discussed in Section 6 of this review. Continued compliance is expected.

6. Regulatory Review

Kinder Morgan is subject to the following state regulations, in addition to the requirements in the General Conditions:

15A NCAC 02D .0524, New Source Performance Standards. See Section 8 of this review.

15A NCAC 02D .0925, Petroleum Liquid Storage in Fixed Roof Tanks. This regulation applies to all fixed roof storage vessels with capacities greater than 39,000 gallons that contain volatile petroleum

liquids whose true vapor pressure exceeds 1.52 pounds per square inch. Volatile petroleum liquid storage vessels with external floating roofs, or that have capacities less than 416,000 gallons that store produced crude oil and condensate prior to lease custody transfer are not subject to this rule.

The following tanks at Kinder Morgan are subject to this regulation:

- Six tanks with external geodesic dome and internal pontoon-type floating roof with double seals, storing gasoline, ethanol, or diesel (TK-1, TK-2, and TK-4 through TK-7)
- Three tanks with fixed roof and internal pontoon-type floating roof with double seals, storing gasoline, ethanol, or diesel (TK-3, TK-9 and TK-10)
- One tank with fixed roof and riveted-type floating roof, storing transmix (TK-11)
- One tank with internal floating roof, storing gasoline, ethanol, or diesel (TK-15)

The following requirements apply to these tanks:

- They must have an internal floating roof equipped with a closure seal, or seals, to close the space between the roof edge and tank wall;
- They must be maintained such that there are no visible holes, tears, or other openings in the seal or any seal fabric or materials;
- All openings except stub drains must be equipped with covers, lids, or seals such that:
    - the cover, lid, or seal is 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; and
    - rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting;
- Planned routine visual inspections must be conducted through roof hatches once per month;
- A complete inspection of cover and seal is conducted whenever the tank is emptied for maintenance, shell inspection, cleaning, or for other nonoperational reasons or whenever excessive vapor leakage is observed; and
- A written or electronic log of the following material storage information for each affected tank shall be maintained:
    - reports of the results of inspections conducted pursuant to Subparagraphs (d)(4) and (d)(5) of this Rule;
    - a record of the average monthly storage temperature, and true vapor pressures of petroleum liquids stored; and
    - records of the throughput quantities and types of petroleum liquids for each storage vessel.

In addition, semiannual summary reporting of monitoring and recordkeeping activities is required. This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

<u>15A NCAC 02D .0927, Bulk Gasoline Terminals</u>. This rule applies to bulk gasoline terminals (a pipeline breakout station of an interstate oil pipeline facility; or a gasoline storage facility that receives gasoline from refineries primarily by pipeline, ship, or barge; delivers gasoline to bulk gasoline plants or to commercial or retail accounts primarily by cargo tank; and has an average gasoline throughput of more than 20,000 gallons/day) and the appurtenant equipment necessary to load the cargo tank compartments. The loading rack (LR-1) at Kinder Morgan is subject to this rule, and the following requirements apply:

- The tank loading rack shall not be used to load gasoline (defined as any petroleum liquid with a Reid vapor pressure of four psia or above) without vapor control.
- All displaced vapors and gases from the tank trucks must be vented to the carbon vapor recovery unit **(ID No. VRU-1)** or the portable vapor combustion unit **(ID No. VCU-1)** with a maximum controlled emission rate of no greater than 35 mg of volatile organic compounds (VOC) per liter of gasoline loaded.
- Liquid drainage from the loading device must be prevented when the device is not in use, or complete drainage from the loading device must be achieved before the loading device is disconnected.
- All loading of vapor lines must be equipped with fittings that make vapor-tight connections and that are automatically and immediately closed upon disconnection.
- Gasoline shall not be discarded in sewers or stored in open containers or handled in any way that would result in evaporation.
- The pressure in the vapor collection system shall not exceed tank truck or trailer pressure relief settings.
- Gasoline shall not be loaded into any tank truck or trailer unless the tank truck or trailer has been certified as leak tight according to 15A NCAC 02D .0932 (see below) within the previous 12 months.
- All leaks must be repaired as follows:
    - The vapor collection hose that connects to the tank truck or trailer shall be repaired or replaced before another tank truck or trailer is loaded at that rack after a leak has been detected originating with the terminal's equipment rather than from the gasoline tank truck or trailer.
    - All other leaks shall be repaired as expeditiously as possible—but no later than 15 days from their detection. 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.
- Kinder Morgan must inspect the vapor collection system, the vapor control system, and each lane of the loading rack while a gasoline truck or trailer is being loaded for liquid and vapor leaks as follows:
    - Visually inspect for leaks each day that the terminal is both manned and open for business;
    - Inspect weekly for leaks using sight, sound, smell, or a meter used to measure VOCs; or explosimeter; and
    - An inspection using either a meter used to measure VOCs or an explosimeter shall be conducted every month.
- Kinder Morgan must perform monthly inspections and perform maintenance on the tank loading rack **(ID No. LR-1),** the vapor recovery unit **(ID No. VRU-1),** and the portable vapor combustion unit **(ID No. VCU**-1) when in use as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include a monthly external inspection of the structural integrity of the loading rack, the vapor recovery unit, and the portable vapor combustion unit.
- Kinder Morgan must keep a written or electronic log of the results of the required inspections and any maintenance performed on the loading rack and associated carbon vapor recovery unit.

In addition, semiannual summary reporting of monitoring and recordkeeping activities is required. This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

15A NCAC 02D .0932, Gasoline Cargo Tanks and Vapor Collection Systems. This Rule applies to gasoline cargo tanks equipped for vapor collection, and to vapor control systems at bulk gasoline terminals, bulk gasoline plants, gasoline dispensing facilities, and gasoline service stations equipped with vapor balance or vapor control systems. Under this rule, the following requirements apply:

- Cargo tanks and their vapor collection systems must be tested annually by a certified cargo tank testing facility. The facility shall follow test procedures defined by 15A NCAC 02D .2615 to certify that each gasoline cargo tank is leak tight before use. No liquid leaks shall be allowed from any gasoline tank truck. The gasoline cargo tank shall not be used unless it is certified leak tight.
- No truck tank 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 described in 15A NCAC 02D .2615 shall 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 according to 15A NCAC 02D .2615
- Kinder Morgan shall test the vapor collection system (VRU-1 and VCU-1) at least once per year according to the procedures provided in 15A NCAC 02D .0912, General Provisions on Test Methods and Procedures.
- Kinder Morgan shall retain records of all certification testing and repairs. The records shall identify the gasoline cargo tank, vapor collection system, or vapor control system; the date of the test or repair; and, if applicable, the type of repair and the date of retest.
- A copy of the most recent leak testing report shall be kept with the cargo truck tank and a copy of the report shall be filed at the terminal. The records shall be maintained for at least two years after the date of the testing or repair, and copies of such records shall be made available within a reasonable time to DAQ upon written request.

In addition, semiannual summary reporting of monitoring and recordkeeping activities is required. This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

15A NCAC 02D .1111, Maximum Achievable Control Technology. See Section 7 of this review.

15A NCAC 02D .1806, Control and Prohibition of Odorous Emissions **(State Enforceable Only)**. This rule, which applies facility-wide and is state-enforceable only, provides for the control and prohibition of objectionable odorous emissions. The rule requires Kinder Morgan to implement management practices or install and operate odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable odors beyond the facility's boundary. This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

15A NCAC 02D .2100, Risk Management Program. See Section 10 of this review.

15A NCAC 02D .2615, Determination of Leak Tightness and Vapor Leaks. This rule establishes test methods for using in determining compliance with 02D .0932, Gasoline Cargo Tanks and Vapor Collection Systems (see above). Under this rule, Kinder Morgan must use one of two test methods from the U.S. EPA document "Control of Volatile Organic Compound Leaks from Gasoline Tank Trucks and Vapor Collection Systems," (EPA-450/2-78-051, December 1978).

- For determining leakage from gasoline cargo tanks and vapor control systems: gasoline vapor leak detection procedure by combustible gas detector described in Appendix B.

- For determining leak tightness of cargo tanks during bottom loading: leak detection procedure for bottom-loaded cargo tanks by bag capture method described in Appendix C.

For annual testing, the pressure-vacuum test procedures for leak tightness of cargo tanks described in Method 27 of Appendix A to 40 CFR Part 60 or 49 CFR 180.407 shall be used to determine the leak tightness of gasoline cargo tanks in use and equipped with vapor collection equipment. Method 27 of Appendix A to 40 CFR Part 60 is changed for fugitive emissions leak prevention to read:

- 8.2.1.2 "Connect static electrical ground connections to tank."
- 8.2.1.3 "Attach test coupling to vapor return line."
- 16.0 No alternative procedure is applicable.

This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

15A NCAC 02Q .0317, Avoidance Conditions. Kinder Morgan has accepted conditions in their air permit in accordance with this regulation to avoid the applicability of 15A NCAC 02D. 0530: Prevention of Significant Deterioration. See Section 9 of this review for further information.

Note: The permit has been updated to reflect the most current stipulations for all applicable regulations.

7. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Maximum and/or Generally Achievable Control Technology (MACT/GACT)

Kinder Morgan is an area source for hazardous air pollutants (HAPs) because the facility emits less than 10 tons per year (tpy) of any individual HAP, and less than 25 tpy of any combination of HAPs. However, the facility is subject to one area source GACT standard – 40 CFR Part 63, Subpart BBBBBB - National Emission Standards for Hazardous Air Pollutants for Source: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

Under Subpart BBBBBB, Kinder Morgan is required to operate and maintain the affected sources, including any associated air pollution control devices, in a manner consistent with safety and good air pollution control practices for minimizing emissions. In addition, the following requirements apply:

Emission Limits and Equipment Requirements

- Storage tanks that are subject to and comply with the control requirements of 40 CFR 60 Subpart Kb shall be determined to be in compliance with the requirements of this GACT
- Storage tanks that are subject to and comply with 15A NCAC 02D .0925 or 15A NCAC 02D .0933 shall also be determined to be in compliance with these requirements. [40 CFR 63.11087]
- For each tank with a capacity of greater than or equal to 75 m^3 and not having both a capacity of less than 151 m^3 and a gasoline throughput of 480 gallons per day or less, Kinder Morgan shall meet one of the following requirements: [Item 2 of Table 1 to Subpart BBBBBB]
    - Reduce emissions of total organic HAP or total organic compounds (TOC) by 95 weight-percent with a closed vent system and control device, as specified in 40 CFR 60.112b(a)(3) of subpart Kb, OR;
    - Equip each internal floating roof gasoline storage tank according to the requirements of 40 CFR 60.112b(a)(1) of subpart Kb, except for the secondary seal requirements under 40 CFR 60.112b(a)(1)(ii)(B) and the requirements in 40 CFR 60.112b(a)(1)(iv) through (ix); AND

  - Equip each external floating roof tank according to the requirements of 40 CFR 60.112b(a)(2) except the requirements of 40 CFR 60.112b(a)(2)(ii) are only required for storage tanks that do not meet the requirements of 40 CFR 60.112b(a)(2)(i), OR;
  - Equip and operate each internal and external floating roof tank according to the applicable requirements in 40 CFR 63.1063(a)(1) and (b) of Subpart WW, except for 40 CFR 63.1063(a)(1)(i)(C) and (D), and equip each external floating roof tank according to the requirements of 40 CFR 63.1063(a)(2) for each tank that does not meet the requirements of 40 CFR 63.1063(a)(1).
- Kinder Morgan shall comply with the applicable requirements of 40 CFR 63.11088 for each gasoline loading rack by complying with the requirements of 15A NCAC 02D .0927. Additionally, the vapor collection system shall be designed and operated to prevent any TOC vapors collected at one loading rack or lane from passing through another loading rack or lane to the atmosphere. 15A NCAC 02D .0927 does not address railcar loading; facilities with railcar loading shall comply with 40 CFR 63.11088.

Monitoring

- Kinder Morgan shall comply with the applicable requirements of 40 CFR 63.11089 for monthly leak inspections of all equipment in gasoline service by complying with the requirements of 15A NCAC 02D .0927 and 15A NCAC 02D .0932.
- Kinder Morgan shall monitor organic compound concentration using a continuous emissions monitoring system (CEMS) that is certified in accordance with 40 CFR Part 60, Appendix B, Performance Specification 8. Before conducting a required continuous monitoring system (CMS) performance evaluation, Kinder Morgan shall develop a site-specific performance evaluation test plan in accordance with 40 CFR 63.8(e).
- For malfunctions, the corrective actions as described in a submitted monitoring and inspection plan shall be followed. Kinder Morgan shall:
  - Initiate corrective action to determine the cause of the problem within 1 hour;
  - Initiate corrective action to fix the problem within 24 hours;
  - Complete all corrective actions needed to fix the problem as soon as practicable consistent with good air pollution control practices for minimizing emissions;
  - Minimize periods of start-up, shutdown, or malfunction; and
  - Take any necessary corrective actions to restore normal operation and prevent the recurrence of the cause of the problem. [40 CFR 63.11092(d)(4)]
- Kinder Morgan shall comply with inspection and testing requirements for each gasoline storage tank that is subject to the emission standard in 40 CFR 63.11087

Recordkeeping

- For each gasoline storage tank subject to this rule, Kinder Morgan shall keep records as specified in 40 CFR 60.115b of Subpart Kb if complying with options 2(a), 2(b), or 2(c) in Table 1 to this subpart, except records shall be kept for at least 5 years. If complying with the requirements of option 2(d) in Table 1, Kinder Morgan shall keep records as specified in 40 CFR 63.1065 of Subpart WW. [40 CFR 63.11094(a)]
- Kinder Morgan shall keep records of the test results for each gasoline cargo tank loading at the facility in accordance with 40 CFR 63.11094(b).
- Kinder Morgan shall record all monthly leak inspections, including a signature at the completion of each inspection and records of each detected leak, in a log book (in written or electronic format), which shall be kept on site and made available to DAQ personnel upon request. Kinder Morgan shall maintain a section in the log book which contains a list, including identification numbers, summary description, or diagram(s) showing the location of all equipment in gasoline service. If Kinder Morgan has elected to implement an instrument program under 40 CFR

63.11089, the records shall contain a full description of the program. [40 CFR 63.11094(d) and (e)]

Semiannual reporting is also required for all monitoring and recordkeeping requirements. This permit renewal does not affect the status of this facility regarding this rule. Continued compliance is expected.

8. New Source Performance Standards (NSPS)

The Kinder Morgan facility is subject to the following NSPS under 40 CFR Part 60:

Subpart Kb, 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. Two tanks at Kinder Morgan are subject to this NSPS:

- TK-3: tank with fixed roof and internal pontoon-type floating roof with double seals, storing gasoline, ethanol, or diesel
- TK-15: tank with internal floating roof, storing gasoline, ethanol, or diesel

Under this NSPS, these tanks are prohibited from storing any volatile organic liquid with a true vapor pressure, as stored, of equal to or greater than 76.6 kPa (11.1 psia). In addition, when storing volatile organic liquid with a maximum true vapor pressure greater than or equal to 0.5 psia in tank TK-15, Kinder Morgan shall retain records of the following for two years:

- identification of the volatile organic liquid stored;
- the period of storage; and
- the maximum true vapor pressure of that liquid during the respective storage period, calculated as specified in 40 CFR 60.116b(e).

Kinder Morgan shall retain records showing the dimensions and an analysis showing the capacity of both TK-3 and TK-15 for the life of the tank. Summary reporting of all monitoring and recordkeeping activities is required semiannually.

Subpart XX, Standards of Performance for Bulk Gasoline Terminals. The tank loading rack (LR-1) and its related vapor control systems (VRU-1 and VCU-1) are subject to Subpart XX. Kinder Morgan is subject to the following requirements under this regulation.

- The tank loading rack (LR-1) shall not be used to load gasoline (i.e., any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kPa or greater which is used as a fuel for internal combustion engines) without vapor control. [40 CFR 60.502(a)]
- Emissions to the atmosphere from the vapor control systems (VRU-1 and VCU-1) due to the loading of liquid product into gasoline tank trucks shall not exceed 35 milligrams of TOC per liter of gasoline loaded. [40 CFR 60.502(b)]
- Each vapor control system (VRU-1 and VCU-1) shall be designed to prevent any TOC vapors collected at one loading rack from passing to another loading rack. [40 CFR 60.502(d)]
- Gasoline shall not be loaded into any tank truck unless the tank truck is vapor-tight.
- Each month the vapor collection system, the vapor processing system, and the loading rack shall be inspected during the loading of gasoline tank trucks for TOC liquid or vapor leaks. Each detection of a leak shall be recorded, and the source of the leak repaired within 15 calendar days after it is detected. [40 CFR 60.502(j)]

- The facility must record the monthly leak inspections and retain records of inspections for at least 2 years. [40 CFR 60.505(c)]
- The tank truck vapor tightness documentation required under 40 CFR 60.502(e)(1) shall be kept on file at the terminal in a permanent form available for inspection.
- Kinder Morgan shall retain records of all replacements or additions of components performed on the vapor control systems (VRU-1 and VCU-1) for at least 3 years.

Semiannual reporting of monitoring and recordkeeping activities is required, including an excess emissions and continuous monitoring system performance report and/or summary report.

This permit renewal does not affect the status of this facility regarding Subparts Kb and XX. Continued compliance with both NSPS is expected.

9. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

In a letter dated February 18, 1998, the U.S. EPA determined that gasoline/fuel terminals such as Kinder Morgan are not included in the "Petroleum storage and transfer units with a total of 300,000 barrels" source category, which is one of the 28 industrial source categories listed in 40 CFR 51.166(b)(1)(i)(a).[1] Therefore, Kinder Morgan would need to exceed 250 tons per year of emissions in order to be classified as a major source for PSD.

Kinder Morgan has accepted conditions in their air permit in accordance with 15A NCAC 02Q .0317, Avoidance Conditions to avoid the applicability of 15A NCAC 02D. 0530: Prevention of Significant Deterioration. The facility-wide PSD limitation for VOCs is 249 tons per consecutive 12-month period. To ensure that VOC emissions remain below this limit, the following restrictions are included in the permit.

- The quantity of gasoline and denatured ethanol products passing through the loading rack (LR-1) shall be less than 919,800,000 gallons per 12-month period;
- The quantity of distillate fuels passing through the loading rack (LR-1) shall be less than 240,000,000 gallons, and no more than 10 percent of the distillate fuels can bypass the VOC vapor control units per 12-month period;
- The carbon vapor recovery unit (VRU-1) shall have an emission limit of 10 milligrams per liter (mg/L) of gasoline loaded to control VOC emissions associated with gasoline emissions from the loading rack (LR-1). The VOC continuous emissions monitoring systems (CEMs) on the carbon vapor recovery unit (VRU-1) shall be used to determine compliance with the 10 mg/L gasoline limit as expressed in percent propane. The results of the most recent performance test using a 6-hour rolling average shall be used to determine compliance with the limit of 10 mg/L of gasoline loaded from vapor recovery unit (VRU-1). The carbon vapor recovery unit **(ID No. VRU-1)** shall be tested once per five-year permit period to establish continued compliance with the VOC emission limit of 10 milligrams per liter of gasoline from the loading rack.
- The most recent approved performance stack test within the past three years shall be used to determine compliance with the 35 mg/L of gasoline limit for the portable vapor combustion unit (VCU-1). Documentation of this performance test must be provided before initial use of the portable unit.

[1] Letter from R. D. Neeley, Chief, Air & Radiation Technology Branch, Air, Pesticides & Toxics, Management Division to C. S. Liu, Mecklenburg County Department of Environmental Protection, February 18, 1998. This letter is included as an attachment to the application review for Permit No. 04739T21 (R. Simpson, July 17, 2018).

- The following inspections and maintenance shall be performed and recorded in a logbook, and made available to DAQ personnel upon request:
    - Inspect the carbon vapor recovery unit (VRU-1) and/or the portable vapor combustion unit (VCU-1) when in use each day that the loading rack is operated (excluding Saturdays, Sundays, and holidays).
    - Perform periodic inspections and maintenance on the carbon vapor recovery unit (VRU-1) and/or the portable vapor combustion unit (VCU-1) as recommended by the manufacturer.
    - Perform an annual inspection of all VOC emissions sources listed in this permit.
- Loading rack **(LR-1)** VOC emissions shall be calculated at the end of each month using the control efficiency from the most recent approved performance test from the carbon vapor recovery unit **(VRU-1)** and the portable vapor combustion unit (**VCU-1)** when in use, as specified in the permit.
- During distillate loading without controls, the facility must validate each truck's previous load by reviewing the Bill of Lading (BOL) to determine that gasoline was not previously loaded. If it is found that gasoline from a truck was previously loaded, the facility will control this truck's loading emissions. This process will be documented on a spreadsheet to include Carrier name, Date, BOL Number previous loaded distillate product name, and a driver certification/sign off that the information provided is true and accurate. Uncontrolled distillate venting would occur from an engineered elevated point on the loading rack vapor return line to the atmosphere with a vapor tight valve and blind flange.
- The facility shall keep records of the following:
    - Monthly gallons of gasoline and denatured ethanol products and distillate fuels passing through the loading rack;
    - Monthly gallons of distillate fuel bypassing the VOC vapor control units; and
    - The monthly VOC emissions from the facility wide sources for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

Semiannual reporting of monitoring and recordkeeping activities is required.

This permit renewal does not affect the status of this facility regarding NSR/PSD. Continued compliance with these PSD avoidance conditions is expected.

10. Risk Management Plan (RMP) Requirements

40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop a RMP in accordance with Section 112(r) of the Clean Air Act. The RMP lists the potential effects of a chemical accident at the facility, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident should occur.

Kinder Morgan is subject to Section 112(r) of the Clean Air Act requirements under 40 CFR 68.10(a) because as stated in a previous permit review[2], they store more than 10,000 pounds of butane, one of the 63 flammable substances listed in §68.130. The pressurized butane storage tank (IBU-01, 60,000-gallon capacity), which became operational on May 8, 2013, equates to roughly 287,146 pounds using a liquid butane density of 35.8 pounds/cubic feet. The facility must therefore comply with all applicable requirements in 15A NCAC 02D .2100, "Risk Management Program," as promulgated in 40 CFR Part 68. The facility is required to revise and update the RMP submitted under 40 CFR 68.150 at least every five

[2] See application review for Permit No. 04739T21 (R. Simpson, July 17, 2018).

years from the date of the most recent update required by 40 CFR 68.190(b)(2) through (b)(7). The most recent due date was August 10, 2022. The facility submitted an RMP on June 30, 2023. The next submittal will be due June 30, 2028.

This permit renewal does not affect the status of the facility regarding RMP requirements. Continued compliance is expected.

11. Compliance Assurance Monitoring (CAM)

The CAM rule (15A NCAC 02D .0614) applies to each pollutant specific emissions unit located at a source that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limitation or standard, and
- It uses a control device to achieve compliance, and
- It has potential pre-control emissions that equal or exceed the major source threshold (i.e., either 100 tpy for criteria pollutants, 10 tpy of any individual HAP, or 25 tpy of any combination of HAP).

The following emission limitations or standards are exempted from the CAM rule:

- NSPS or NESHAP standards proposed after November 15, 1990;
- Stratospheric ozone protection requirements under Title VI of the Clean Air Act
- Acid rain program requirements;
- Emission limitations or standards or other requirements that apply solely under an approved emissions trading program approved under the rules of Subchapters 02D and 02Q of Chapter 15A and incorporated in a permit issued under 15A NCAC 02Q .0500;
- An emissions cap that is approved under the rules of Subchapters 02D and 02Q of Chapter 15A and incorporated in a permit issued under 15A NCAC 02Q .0500;
- Emission limitations or standards for which a permit issued under 15A NCAC 02Q .0500 specifies a continuous compliance determination method, as defined in 40 CFR 64.1—unless the applicable compliance method includes an assumed control device emission reduction factor that could be affected by the actual operation and maintenance of the control device (e.g., a surface coating line controlled by an incinerator for which continuous compliance is determined by calculating emissions on the basis of coating records and an assumed control device efficiency factor based on an initial performance test; in this example, this CAM rule would apply to the control device and capture system, but not to the remaining elements of the coating line, such as raw material usage).
- Certain municipally owned utility units, as defined in 40 CFR 72.2.

Please note that the emission unit is not exempted from the CAM rule if nonexempt emission limitations or standards (e.g. a state rule or an older NSPS emission limits) apply to the emissions unit.

CAM is not applicable to any of the sources at the Kinder Morgan facility. Most of the sources at the facility are exempt because they are subject to a NSPS or NESHAP standard proposed after November 15, 1990. Only one source at the facility is not subject to a NSPS or NESHAP—the transmix storage tank (TK-11). This tank does not employ a control device to achieve compliance; therefore CAM does not apply to this tank.

This permit renewal does not affect the facility's status with respect to CAM. Continued compliance is expected.

12. Facility-wide Air Toxics Review

As stated in a previous application review (Permit No. 04739T21, R. Simpson, July 17, 2018), the facility has not previously triggered a toxics review. The entire facility was considered subject to GACT (40 CFR Part 63 Subpart BBBBBB) and therefore was exempt from the requirement for a permit to emit air toxics per 15A NCAC 02Q .0702 (a) and (c). However the same permit review also notes that this GACT requirement was deleted for tank TK-11 because it stores transmix, a product that does not meet the definition of gasoline.

Previous modifications to this permit did not trigger an air toxics review because 15A NCAC 02Q .0702(c) states, "The addition or modification of an activity identified in Paragraph (a) of this Rule shall not cause the source or facility to be evaluated for emissions of toxic air pollutants." While an air toxics review is not warranted during this permit renewal, the removal of the GACT requirement for tank TK-11 opens the facility for an air toxics review at the occasion of the next permit modification, as required by 15A NCAC 02Q .0706, "Modifications." The review should assess whether emissions from sources at the facility exceed the toxic permit emission rates as established in 15A NCAC 02Q .0711, "Emission Rates Requiring a Permit." If they have, they may be subject to air toxic emission limits in accordance with 15A NCAC 02D .1100, "Control of Toxic Air Pollutants" that would be established through a facility-wide worst-case single stack modeling demonstration.

13. Facility Emissions Review

The table in the header page of this review summarizes emissions Kinder Morgan has reported in the annual emissions inventories from 2017 through 2021 after application of required emission controls. As shown, annual emissions of criteria pollutants have remained relatively constant during this period, with VOC being the largest individual criteria pollutant emitted. Annual HAP emissions have increased slightly during the same period, with xylene being the largest single HAP emitted.

14. Compliance History and Status

The following chronology dates from when the Kinder Morgan Title V permit was first issued on July 17, 2018.

August 6, 2018	Winston-Salem Regional Office (WSRO) issues Notice of Violation (NOV) to Kinder Morgan for violating Condition A.18.a.v of Air Quality Permit 04739R20, which states, "the Permittee shall operate the vapor recovery unit (I.D. No. VRU-1) such that the vacuum across the regeneration side of the activated carbon beds is not less than 25 inches of mercury" (according to the facility's semi-annual report, the violation occurred between March 4 and 5, 2018). Kinder Morgan subsequently requested that DAQ remove this requirement from the permit, since they already monitor VRU-1 with a continuous emissions monitoring system. DAQ accommodated this request in the issuance of Air Quality Permit 04397T21.

September 25, 2018	Robert Barker, WSRO, conducts Section 112(r) compliance inspection of Kinder Morgan's Risk Management Program. The facility appears to have a complete and current RMP that demonstrates procedural compliance with the 112(r) rule.
February 22, 2019	Hunter Johnson, WSRO, conducts facility compliance inspection. The facility appears to be operating in compliance with all permit requirements.
September 22, 2020	Davis Murphy, WSRO conducts facility compliance inspection. The inspection reveals that Kinder Morgan failed to perform a required daily leak inspection of the loading rack and vapor collection and processing system, violating permit condition 2.1 A.2.h.i of Air Quality permit 04739T21. Kinder Morgan also did not report the deviation of this permit condition, thereby failing to fulfill the requirements of Condition 2.1 A.2.k of the same permit. Finally, Kinder Morgan did not report the deviation in their annual compliance certification, violating General Condition 3.P of Air Quality Permit 04739T21.
October 9, 2020	DAQ issues Notice of Deficiency (NOD) to Kinder Morgan for the violations discovered during the September 22, 2020 compliance inspection.
October 22, 2020	Kinder Morgan responds to the NOD, stating they have given on-site personnel additional training on regulatory recordkeeping.
August 31, 2021	Mohammad Khan, WSRO, conducts facility compliance inspection. The facility appears to be operating in compliance with all permit requirements.
August 2, 2022	Mohammad Khan, WSRO, conducts facility compliance inspection. The facility appears to be operating in compliance with all permit requirements.
April 25, 2023	Mohammad Khan, WSRO, conducts facility compliance inspection. The facility appears to be operating in compliance with all permit requirements.

In summary, since their Title V permit was first issued in 2018, Kinder Morgan has been issued a NOV and an NOD for monitoring and reporting issues. Upon receiving notice of these issues, they have responded with timely and appropriate corrective actions. Permit compliance will continue to be assessed through onsite compliance inspections and review of required reports.

15. 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 .0518(b), the U.S. EPA will have a 45-day review period. In general, as agreed by DAQ and EPA Region 4, EPA's 45-day review period will run concurrent with the 30-day comment period unless advised otherwise. 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 02Q .0521 above.

Virginia is an affected state within 50 miles of the facility, and the Forsyth County Office of Environmental Assistance and Protection is an affected local program.

Notice of the DRAFT Title V Permit to Affected States ran from XXXX, 2023, to XXXX, 2023. ***Insert discussion of any comments received from Affected States or Local Programs.***

Public Notice of the DRAFT Title V Permit ran from XXXX, 2023, to XXXX, 2023. ***Insert discussion of any public comments received.***

EPA's 45-day review period ran concurrent with the 30-day Public Notice, from XXXX, 2023, to XXXX, 2023. ***Insert discussion of any comments received from U.S. EPA and EPA Region 4 regarding the DRAFT Title V Permit.***

16. Other Regulatory Considerations

The following items were not required in Permit Application No. 4100295.22A:

- Professional Engineer's seal
- Zoning consistency determination
- Permit fee.

17. Recommendations

DAQ has reviewed the permit application(s) for Kinder Morgan Southeast Terminals LLC- Greensboro 1 Terminal located in Greensboro, Guilford County to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 04739T25 upon completion of the public participation and EPA review periods.