

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date: XXXX XX, 2022

Region: Raleigh Regional Office
County: Johnston
NC Facility ID: 5100135
Inspector's Name: Maureen Conner
Date of Last Inspection: 03/10/2021
Compliance Code: 3 / Compliance - inspection

Facility Data	Permit Applicability (this application only)
<p>Applicant (Facility's Name): Kinder Morgan Southeast Terminals, LLC Selma 1, 2, 3, & 4</p> <p>Facility Address: Kinder Morgan Southeast Terminals, LLC Selma 1, 2, 3, & 4 2200 West Oak Street Selma, NC 27576</p> <p>SIC: 4226 / Petroleum Bulk Stations & Terminals NAICS: 493190 / Petroleum Bulk Stations and Terminals</p> <p>Facility Classification: Before: Synthetic Minor After: Title V Fee Classification: Before: Synthetic Minor After: Title V</p>	<p>SIP: 15A NCAC 02D .0516, .0521, .0535, .0540, .0925, .0927, .0932, .0948, .1806, and .2615</p> <p>NSPS: 15A NCAC 02D .0524 – Subpart K, Subpart Ka, Subpart Kb, & Subpart XX</p> <p>NESHAP: 15A NCAC 02D .1111 – Subpart BBBB</p> <p>PSD: N/A PSD Avoidance: 15A NCAC 02Q .0317 for 02D .0530</p> <p>NC Toxics: N/A 112(r): 15A NCAC 02D .2100 Other: N/A</p>

Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	
Brian Pilkington Superintendent (919) 279-7849 2200 West Oak St. Selma, NC 27576	Duncan Sinclair Manager of Operations (770) 751-4116 1000 Windward Concourse, Suite 450 Alpharetta, GA 30005	Johnny Tapia OSG Air Support (704) 249-9936 502 Tom Sadler Rd. Charlotte, NC 28214	<p>Application Number: 5100135.21A Date Received: 06/30/2020 Application Type: Modification Application Schedule: TV-1st Time</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: 04716/R23 Existing Permit Issue Date: 06/19/2019 Existing Permit Expiration Date: 12/31/2023</p>

Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
<No Inventory>							

<p>Review Engineer: David B. Hughes</p> <p>Review Engineer's Signature: _____ Date: XXXX XX, 2022</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 04716/T24 Permit Issue Date: XXXX XX, 2022 Permit Expiration Date: XXXX XX, 2027</p>
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I. Introduction:

Kinder Morgan Southeast Terminals, LLC currently holds four Synthetic Minor Permits. One at Kinder Morgan Southeast Terminals, LLC Selma 1 (Air Permit No. **04716R23**) with an expiration date of December 31, 2023, one at Kinder Morgan Southeast Terminals – Selma Terminal 2 (Air Permit No. **09874R02**) with an expiration date of July 31, 2025, one at Kinder Morgan Southeast Terminals LLC, Selma 3 Terminal (Air Permit No. **04337R22**) with an expiration date of February 28, 2025, and one at Kinder Morgan Southeast Terminals – Selma 4 Terminal (Air Permit No. **02584R15**). The purpose of this application is to combine the existing synthetic minor air permits for the four Terminals (Selma 1, Selma 2, Selma 3, and Selma 4) into a single Title V permit for all four Terminals. This is being done because the Division of Air Quality (DAQ) has determined that the three criteria: (1) contiguous or adjacent properties, (2) belonging to the same Industrial grouping (same 2-digit Standard Industrial Classification (SIC), and (3) are under common control ownership have been met and that the four facilities should be aggregated into one Title V permit. Kinder Morgan does not agree all terminals meet the criteria but decided to aggregate all terminals, per a letter sent to DAQ dated March 26, 2021. Application No. **5100135.20A** was received on June 30, 2020 to combine facilities Selma 1 and Selma 3. Following an applicability determination response on whether all four facilities should be considered one facility for permitting purpose, the applicant amended the application on May 19, 2021 to combine facilities Selma 1, 2, 3 and 4 (Note: this amendment changed the application No. to **5100135.21A**).

II. Description of Facility:

Kinder Morgan’s Selma 1 Terminal (formerly known as Johnston County Terminal) is a “bulk gasoline terminal” for trucks that deliver gasoline, diesel fuel oil, and kerosene to retail gas stations and industry. The fuel products are delivered underground by Colonial pipeline, ethanol is received via tanker truck and incoming piping from Selma 3. The facility stores the fuels on-site in eight various sized tanks. The facility blends several additives to the fuels, including dye, ethanol and mostly recently butane, the latter most begun in April 2013.

Kinder Morgan’s Selma 2 Terminal is a bulk denatured ethanol distribution terminal. Currently, this terminal is unmanned.

Kinder Morgan’s Selma 3 Terminal is a “bulk gasoline terminal” for trucks that deliver gasoline, diesel fuel oil, and kerosene to retail stations and industry. The fuel products are delivered to the site by tanker trucks and underground pipeline coming from Greensboro, N.C. The facility stores the fuels on-site in seven various sized tanks varying from 20,000 to 55,000 barrels.

Kinder Morgan’s Selma 4 Terminal is an unmanned loading operation for trucks that deliver gasoline, diesel fuel oil, and kerosene to retail gas stations and industrial sites. The fuel products are delivered to the site by underground pipeline; fuel additives such as ethanol are delivered by tanker truck and pipeline to the tanks on site.

III. History/Background/Application Chronology

December 7, 2016 – Permit No. **02584R15** was issued as a Synthetic Minor for Kinder Morgan Southeast Terminals – Selma 4 Terminal.

March 7, 2017 - Permit No. **04337R22** was issued as a Synthetic Minor for Kinder Morgan Southeast Terminals, LLC – Selma 3 Terminal.

August 29, 2017 – Permit No. **09874R02** was issued as a Synthetic Minor for Kinder Morgan Southeast Terminals – Selma 2 Terminal.

June 19, 2019 - Permit No. **04716R23** was issued as a Synthetic Minor for Kinder Morgan Southeast Terminals, LLC Selma 1 Terminal.

September 17, 2019 – Maureen Conner of the Raleigh Regional Office (RRO) completed the annual inspection for Terminals Selma 1, Selma 2, Selma 3, and Selma 4.

June 20, 2020 – Permit Application **5100135.20A** received as a Title V modification. The Permittee has requested replacing two existing synthetic minor air permits (Selma 1 and Selma 3 Terminals) into a single Title V permit. The application was deemed complete for processing.

October 9, 2020 – DRAFT permit sent to Permittee, Supervisor, RRO and Tech Services for comment. No comments were received because DAQ and the Raleigh Regional Office discussed and decided that Terminals Selma 1, Selma 2, Selma 3, and Selma 4 should be considered one facility. DAQ determined that the three criteria: (1) contiguous or adjacent properties, (2) belonging to the same Industrial grouping (same 2-digit Standard Industrial Classification (SIC), and (3) are under common control ownership had been met and that the four facilities should be aggregated into one Title V permit.

January 4, 2021 – DAQ sent an Additional Information Request letter regarding aggregating Selma 1, 2, 3, and 4.

January 12, 2021 – DAQ received the Kinder Morgan Southeast Terminals (KMST) response letter to Additional Information Request.

February 9, 2021 – DAQ sent an Amended Application Request letter regarding aggregating Selma 1, 2, 3, and 4 Terminals.

March 19, 2021 – Maureen Conner of the Raleigh Regional Office (RRO) completed the annual inspection for Terminals Selma 1, Selma 2, Selma 3, and Selma 4.

March 25, 2021 – DAQ and KMST personnel participated in a conference call via Teams to discuss aggregating all four Selma terminals. Participants of the meeting are Mark Cuilla, Booker Pullen, and David B. Hughes (NC DAQ), Will Wike, Dena Pittman and Taylor Hartsfield (Raleigh Regional Office), Johnny Tapia and Nina McAfee (KMST), and Chris Bagely (SynTerra).

March 26, 2021 – KMST submitted a response letter to the Amended Application Request stating that they will aggregate all four Selma terminals.

May 19, 2021 – DAQ received an addendum to original permit application **5100135.20A** to aggregate all four Selma terminals. New permit application No. **5100135.21A**.

May 21, 2021 – Johnny Tapia (KMST) sent DAQ an email requesting to add language regarding explicitly allowing uncontrolled distillate loading at the Selma 1, Selma 3, and Selma 4 terminals to draft air permit **04716R24**.

May 24, 2021 – Mark Cuilla and Booker Pullen agree with the addition of the new language to the draft air permit **04716R24**.

July 12, 2021 – DRAFT permit sent to Permittee, Supervisor, RRO and Tech Services for comment.

July 20, 2021 – Johnny Tapia (KMST) requested that the combination of Selma 1-4 be changed from a modification of their current Synthetic Minor permits to a 1st time Title V permit.

October 5, 2021 – DRAFT permit and review sent to Permittee, Supervisor, RRO and Samir Parekh for comment. The Permittee provided comments on draft permit and review via e-mail **November 4, 2021**. Samir Parekh of RCO provided comments on the review draft via e-mail on **October 13, 2021**. Raleigh Regional Office provided comments on draft permit on **November 10, 2021**.

October 19, 2021 – Johnny Tapia (KMST) sent in an Applicability Determination (3736) via email requesting to change product stored from ethanol to gasoline additives for Tank I-A1 at Selma 3 Terminal.

October 21, 2021 – DAQ sends out approval letter via email for Applicability Determination No. 3736.

November 30, 2021 – Revised DRAFT permit and review sent to Permittee, Supervisor, and RRO for comment. The Permittee provided comments on draft permit and review via e-mail **December 16, 2021** and **January 6, 2022**. Raleigh Regional Office had no comments on revised DRAFT.

DATE, 2022 – Draft permit and associated technical review sent to 30-day public and parallel 45-day EPA comment periods.

XXXX XX, 2022 – Title V Equipment Editor equipment descriptions were approved by Jenny Sheppard TVEE Coordinator.

XXXX XX, 2022 – 30-day public comment period ended.

XXXX XX, 2022 – 45-day EPA comment period ended

XXXX XX, 2022 – Permit **047160T24** was issued.

IV. Permit Modifications/Changes and ESM Discussion

The following changes were made to Kinder Morgan Southeast Terminals, LLC Selma 1 Air Permit No. 04716R23, Selma 2 Air Permit No. 09874R02, Selma 3 Air Permit No. 04337R22, and Selma 4 Air Permit No. 02584R15. (Note that once the TV 1st time permit is issued under 04716, permit Nos. 09874, 04337, and 02584 will be rescinded.)

Page No(s).	Section	Description of Changes
Cover	Throughout	-Updated all tables, dates, and permit revision numbers.
2	Section 1 Table	-Added emission sources from Selma 1, 2, 3, & 4 from Synthetic minor permits.
2 and 3	2.1 A	-Added three bottom-loading tank truck loading racks (ID Nos. S1-ES-Rack, S3-LR-1 and S4-ES-1) with control devices vapor combustion units (ID Nos. S1-VCU-1, S3-VCU-1, and S4-VCU-1) respectively with applicable regulations.
3	2.1 B	-Added ethanol bottom-loading tank truck loading rack (ID No. S2-ES-Rack) with applicable regulations.

Page No(s).	Section	Description of Changes
4	2.1 C	-Added one internal floating-roof with storage tank (ID No. S4-T-202) with applicable regulations.
4	2.1 D	-Added four internal floating-roof installed on a fixed-roof storage tanks (ID Nos. S1-T-2, S1-T-5, S1-T-6 and S1-T-7) with applicable regulations.
4 & 5	2.1 E	-Added one internal floating-roof installed on a fixed-roof storage tank (ID No. S1-T-3), two internal pan type floating-roof installed on a fixed-roof storage tanks (ID Nos. S3-T-4 and S3-T-7) and one-fixed-roof with an internal-roof storage tank (ID No. S4-T-201) with applicable regulations.
5 & 6	2.1 F	-Added four internal pan type floating-roof installed on a fixed-roof storage tanks (ID Nos. S3-T-5, S3-T-6, S3-T-2, and S3-T-1), and two internal floating-roof storage tanks (S4-T-402 and S4-T-401) with applicable regulations.
6-9	2.2 A	-Added all emission sources from Selma 1, 2, 3, & 4 synthetic minor permits with applicable regulations.
	Section 3 Insignificant Activities	-Added Insignificant emission sources from Selma 1, 2, 3, & 4 from Synthetic minor permits. -Moved Insignificant list and removed 3 rd footnote.
25-27	Section 4 General Conditions	-Updated shell conditions (v6.0, 01/07/2022).

Equipment descriptions were added to the Title V Equipment Editor (TVEE).

V. Regulatory Review/Equipment Changes

The facility is currently subject to the following regulations:

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 60, Subparts K, Ka, Kb, and XX)

15A NCAC 02D .0535, "Excess Emissions Reporting and Malfunctions"

15A NCAC 02D .0540, "Particulates from Fugitive Dust Emission Sources"

15A NCAC 02D .0925, "Petroleum Liquid Storage in Fixed Roof Tanks"

15A NCAC 02D .0927, "Bulk Gasoline Terminals"

15A NCAC 02D .0932, "Gasoline Truck Tanks and Vapor Collection Systems"

15A NCAC 02D .1111, "Maximum Achievable Control Technology" (40 CFR 63, Subpart BBBBBB) (*Area Source GACT*)

15A NCAC 02D .1806, "Control and Prohibition of Odorous Emissions" (*State-enforceable only*)

15A NCAC 02D .2615, "Determination of Leak Tightness and Vapor Leaks"

15A NCAC 02Q .0317, "Avoidance Conditions" (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)

An extensive technical review for each applicable regulation at each facility can be found at the end of this document. Appendix B (Selma 1), Appendix C (Selma 2), Appendix D (Selma 3), and Appendix E (Selma 4). The facility's status with respect to most of regulations has not changed even though the four synthetic minor permits were combined. Regulation 15A NCAC 02D .0940 "Determination of Leak Tightness and Vapor Leaks" was repealed. Replaced with regulation 15A NCAC 02D .2615 "Determination of Leak Tightness and Vapor Leaks." Facility-wide regulations were added for 15A NCAC 02Q .0317 "Avoidance Conditions" for 15A NCAC 2D .0530

“Prevention of Significant Deterioration (PSD) for VOCs”. 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.

Below are the Facility-wide VOC & HAP Potential-to-Emit for Kinder Morgan Southeast Terminals, LLC Selma 1, 2, 3 & 4.

Kinder Morgan Southeast Terminals, LLC Selma 1

Pollutant	Permitted Sources (lbs)	Exempt Sources (lbs)	Total (lbs)	Total (tons)
VOC	200,681.30	11,318.00	211,999.30	106.00
Benzene	1,012.10	25.93	1,038.03	0.52
Cumene	15.86	5.44	21.29	0.01
Ethylbenzene	83.37	19.47	102.83	0.05
Hexane	904.21	41.52	945.73	0.47
Trimethylpentane	756.80	36.46	793.26	0.40
Toluene	1,179.64	84.22	1,263.86	0.63
Xylene	521.50	87.57	609.06	0.30
Aggregate HAPs	4,473.50	300.60	4,774.10	2.39
CO	23,704.60	0.00	23,704.60	11.85
NO _x	5,199.70	0.00	5,199.70	2.60

Kinder Morgan Southeast Terminals, LLC Selma 2

Pollutant	Permitted Sources (lbs)	Exempt Sources (lbs)	Total (lbs)	Total (tons)
VOC	83,642.40	3,475.60	87,118.00	43.56
Benzene	97.32	3.62	100.94	0.05
Cumene	1.22	0.42	1.64	0.00
Ethylbenzene	7.19	1.28	8.46	0.00
Hexane	86.99	2.75	89.74	0.04
Trimethylpentane	71.40	4.79	76.19	0.04
Toluene	110.44	8.06	118.50	0.06
Xylene	44.56	6.58	51.14	0.03
Aggregate HAPs	419.10	27.50	446.60	0.22
CO	0.00	0.00	0.00	0.00
NO _x	0.00	0.00	0.00	0.00

Kinder Morgan Southeast Terminals, LLC Selma 3

Pollutant	Permitted Sources (lbs)	Exempt Sources (lbs)	Total (lbs)	Total (tons)
VOC	112,428.20	6,929.30	119,357.50	59.68
Benzene	573.36	13.17	586.53	0.29
Cumene	11.48	3.01	14.48	0.01
Ethylbenzene	53.43	15.21	68.64	0.03
Hexane	509.22	14.51	523.73	0.26
Trimethylpentane	442.93	21.77	464.69	0.23
Toluene	691.20	57.17	748.37	0.37
Xylene	315.91	60.84	376.76	0.19
Aggregate HAPs	2,597.50	185.67	2,783.20	1.39
CO	29,697.30	0.00	29,697.30	14.85
NO _x	6,514.30	0.00	6,514.30	3.26

Kinder Morgan Southeast Terminals, LLC Selma 4

Pollutant	Permitted Sources (lbs)	Exempt Sources (lbs)	Total (lbs)	Total (tons)
VOC	73,311.90	9,213.30	81,525.20	40.76
Benzene	377.82	42.48	420.30	0.21
Cumene	8.45	4.98	13.44	0.01
Ethylbenzene	41.05	29.30	70.36	0.04
Hexane	335.19	40.09	375.28	0.19
Trimethylpentane	296.53	51.47	348.01	0.17
Toluene	475.59	123.15	598.74	0.30
Xylene	230.31	118.45	348.77	0.17
Aggregate HAPs	1,765.00	409.90	2,174.90	1.09
CO	20,806.10	0.00	20,806.10	10.40
NO _x	4,563.90	0.00	4,563.90	2.28

Selma 1, Selma 2, Selma 3 and Selma 4 Combined VOC & HAP PTE (Permitted + Exempt)

Pollutant	Total (lbs)	Total (tons)
VOC	500,000.00	250.00
Benzene	2,145.80	1.07
Cumene	50.86	0.03
Ethylbenzene	250.29	0.13
Hexane	1,934.48	0.97
Trimethylpentane	1,682.15	0.84
Toluene	2,729.48	1.36

Xylene	1,385.73	0.69
Aggregate HAPs	10,178.80	5.09
CO	74,208.00	37.10
NO _x	16,277.90	8.14

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

NSPS – The facility is required to comply with the following New Source Performance Standards (NSPS) promulgated in 40 CFR Part 60 by the EPA.

40 CFR Part 60, Subpart XX

The facility is subject to 15A NCAC 02D .0524 as promulgated in 40 CFR Part 60 Subpart XX for “Bulk Gasoline Terminals” due to the bottom-loading tank truck loading rack (ID No. S1-ES-Rack, Selma 1), a bottom-loading rack (consisting of three loading bays) (ID No. S3-LR-1, Selma 3), and a 2-bay, 10-meter bottom loading rack (ID No. S4-ES-1, Selma 4). These sources are limited to 35 milligrams of VOC per liter of gasoline loaded. Compliance with the requirements of 02D .0927 “Gas Bulk Terminals” and 02D .0932 “Gasoline Truck Tanks and Vapor Collection Systems” conditions in the permit shall be sufficient to demonstrate compliance. This permit modification does not affect this status.

40 CFR Part 60, Subpart K

The Permittee is subject to 15A NCAC 02D .0524 as promulgated in 40 CFR Part 60 Subpart K, “Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to May 19, 1978”. One storage tank is subject to this rule (ID No. S4-T-202). Based on 40 CFR Part 60, Subpart K, the Permittee is required to equip the tank with an internal floating-type cover per 40 CFR 60.112a as well as the monitoring and recordkeeping activities per 40 CFR 60.113a. This permit modification does not affect this status.

40 CFR Part 60, Subpart Ka

The Permittee is subject to 15A NCAC 02D .0524 as promulgated in 40 CFR Part 60 Subpart Ka, “Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978 and prior to July 23, 1984”. The emission sources subject to this rule are storage tanks (ID Nos. S1-T-2, S1-T-5, S1-T-6, and S1-T-7). Based on NSPS 40 CFR Part 60, Subpart Ka, the Permittee is required to equip the tanks with internal floating type covers per 40 CFR 112a as well as the monitoring and recordkeeping activities per 40 CFR 60.115a. This permit modification does not affect this status.

40 CFR Part 60, Subpart Kb

The Permittee is subject to 15A NCAC 02D .0524 as promulgated in 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”. The emission sources subject to this rule are storage tanks (ID Nos. S1-T-3, S3-T-4, S3-T-7 and S4-T-201). Based on NSPS 40 CFR Part 60, Subpart Kb, the Permittee is required to equip the tanks with internal floating type covers per 40 CFR 60.112b(a)(1) as well as the monitoring and recordkeeping activities per 40 CFR 60.115b and 40 CFR 60.116b. This permit modification does not affect this status.

Johnny Tapia (KMST) sent David B. Hughes (DAQ) an email on October 19, 2021 requesting that emission source (ID No. S4-T-201) be included in Section 1 Condition 2.1 E along with the other three emission sources (ID No. S1-T-3, S3-T-4, and S3-T-7) that are subject to 40 CFR Part 60, Subpart Kb. Mr. Tapia states in his email the following reasons why S4-T-201 is subject to 40 CFR Part 60, Subpart Kb:

1. In 2016 an expansion project at the Selma 4 terminal included among other things a modification to tank S4-T-201, which at the time was an external floating roof (EFR) storing diesel. The modifications included the addition of a geodome thus converting tank S4-T-201 to a Domed EFR (DEFER) in order to start storing gasoline. A permit application dated 9/22/16 was submitted to the North Carolina Department of Environmental Quality (NCDEQ), which listed tank S4-T-201 as subject to 40 CFR Part 60, Subpart Kb due to the modification.
2. The NCDEQ accepted the application as completed for processing by letter dated 9/28/16 with application No. 5100041.16A.
3. The NCDEQ issued permit 02585R15 on 12/7/16 with the same effective date. The updated permit did not list tank S4-T-201 as being subject to 40 CFR Part 60, Subpart Kb. This was an oversight. The modification for tank S4-T-201 was completed in 2017.
4. On May 5, 2021 Kinder Morgan submitted a revised application for the aggregation of the four Selma terminals including Selma 4. In the application, Form A2, attachment 1 of 2, page 3 did not list tank S4-T-201 as subject to 40 CFR Part 60, Subpart Kb. This was in error as the list was pulled out from the existing permit. The rest of the application including emissions calculations (page 248 of 397) considers tank S4-T-201 a Domed EFR, and Form B (pages 358/359 of 397) do describe tank S4-T-201 as being subject to 40 CFR Part 60, Subpart Kb. However, Form E1 (page 384 of 397), Form E2 (page 385 of 397) do not list tank S4-T-201 as subject to 40 CFR Part 60, Subpart Kb.
5. The important fact is that tank S4-T-201 was modified in 2016/2017 and converted from an EFR to a DEFER and also changed to store gasoline from diesel. Unless the construction of the geodome and change of service to gasoline is not considered a modification then I am convinced that tank S4-T-201 is subject to 40 CFR Part 60, Subpart Kb.

The NCDEQ has reviewed and verified the information given above. The NCDEQ agrees with Johnny Tapia that tank S4-T-201 is subject to 40 CFR Part 60, Subpart Kb and the tank has been added to Section 2.1 E.

NESHAPS/MACT/GACT – National Emissions Standards for Hazardous Air Pollutants (NESHAP) are emission standards for HAP and are applicable to major and area sources of HAP. A HAP major source is defined as having potential emissions of 10 tpy or more for any individual HAP and/or potential emissions of 25 tpy or more for total HAP. An area source is a stationary source that is not a major source. Part 63 NESHAP allowable emission limits are established on the basis of a Maximum Achievable Control Technology (MACT) determination for major sources in a particular source category. For area sources, allowable limits are based on generally available control technology (GACT).

The Permittee is currently subject to the General Achievable Control Technology Standards 40 CFR 63 Subpart BBBBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities," including Subpart A "General Provisions." All of the emission sources from Selma 1 Terminal (ID Nos. S1-T-2, S1-T-5, S1-T-6, S1-T-7, S1-ES-Rack, and S1-T-3), Selma 3 Terminal (ID Nos. S3-LR-1, S3-T-5, S3-T-6, S3-T-2, S3-T-1, S3-T-4, S3-T-7), and Selma 4 Terminal (ID Nos. S4-ES-1, S4-T-202, S4-T-402, S4-T-401, S4-T-201) are subject to this rule. Selma 2 Terminal (ID No. S2-ES-Rack) is not subject to 40 CFR Part 63, Subpart BBBBBB. The permit currently includes references to the

requirements in each of the paragraphs of this Subpart. This permit modification does not affect this status.

PSD – The PSD major source threshold for Selma 1, Selma 2, Selma 3, and Selma 4 Terminals, as individual facilities, or as combined facilities (as they will be under the Title V air permit issued in response to this permit application), is 250 tons per year (tpy) (see VOC & HAP PTE table above). The potential to emit VOC of the combined Selma 1, Selma 2, Selma 3 and Selma 4 Terminals, under the proposed single Title V permit, is 250 tpy (see table above). However, this permit application does not trigger PSD permitting applicability because there is no physical modification associated with the administrative exercise of creating a single Title V air permit to replace the four existing synthetic minor air permits.

There are no physical changes associated with this permit application. Removal of the existing synthetic minor air permit facility fuel throughput limits may result in an increase in the hours of operation or in actual production rate (as measured by fuel throughput). However, the increases are specifically excluded from the definition of *major modification* at 40 CFR 51.166(b)(2)(iii)(f) “unless such change would be prohibited under any federally enforceable permit condition which was established after January 6, 1975, pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 60, Subpart I or §51.166.”

The existing synthetic minor air permit limits were taken to avoid the applicability of 15A NCAC 02Q .0501 (Title V air permitting requirements) and not PSD permitting requirements “pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 60, Subpart I or §51.166.” Therefore, an increase in hours of operation or production rate that results from this permit application is not subject to inclusion when determining if a major modification will occur. Because the creation of a single Title V air permit to replace the existing synthetic minor air permits for the Selma 1 Terminal (Air Permit No. 04716R23), the Selma 2 Terminal (Air Permit No. 09874R02), and the Selma 3 Terminal (Air Permit No. 04337R22) and the Selma 4 Terminal (Air Permit No. 02584R15) is not a major modification, the permit application does not trigger PSD permitting.

Based on the attached EPA memo dated February 18, 1998, EPA determined that the source category described as “Petroleum storage and transfer units with a total of 300,000 barrels” in Section 52.21(b)(1)(i)(a) under the PSD program does not extend to gasoline/fuel terminals. They determined that the term “petroleum” is limited to crude oil and not its refined products (gasoline). Therefore, gasoline storage facilities are not among the 28 industrial source categories listed in 40 CFR 51.166(b)(1)(i)(a) (See Attachment A). As such, the combined facility is currently a minor source for PSD for all criteria pollutants unless the 250 tpy threshold is exceeded. This permit modification does not affect this status.

However, a PSD avoidance condition (15A NCAC 02Q .0317) for 15A NCAC 02D .0530 will be added to the permit for this modification for facility-wide VOC emissions (less than 250 tpy on a 12-month rolling average). Monitoring/Recordkeeping conditions require that calculations of VOC emissions per month shall be made at the end of each month. VOC emissions shall be determined by multiplying the total amount of each type of VOC-containing material consumed during the month by the VOC content of the material. Calculations and the total amount of VOC emissions shall be recorded monthly in a logbook. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months. Future projects could result in the facility being a major source for PSD.

112(r) – Selma 3 is the only facility that is subject to Section 112(r) of the Clean Air Act requirements as it stores Butane (**ID No. IS3-BTU-1**). The Butane blending happens at Selma 1 only. This permit modification does not affect this status.

CAM – 40 CFR 64 requires that a compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold and use a control device to meet an applicable standard.

The only emission sources from the four terminals with a control device are; (1) Bottom-loading tank truck loading rack (ID No. S1-ES-Rack, Selma 1) controlled by a vapor combustion unit (ID No. S1-VCU-1), (2) Bottom-loading rack (consisting of three loading bays) (ID No. S3-LR-1, Selma 3) controlled by vapor combustion unit (ID No. S3-VCU-1); and (3) 2-bay, 10-meter bottom-loading rack (ID No. S4-ES-1) controlled by vapor combustion unit (ID No. S4-VCU-1).

CAM is not applicable for this facility because all emission sources are regulated with a NSPS and/or NESHAP standard. The three emission sources are exempt from CAM because 40 CFR Part 60, Subpart XX was proposed before November 15, 1990 and 40 CFR Part 63, Subpart BBBBBB was proposed after November 15, 1990. This application does not affect this status.

VII. Facility Wide Air Toxics (State Enforceable Only)

The four terminals have not previously triggered a toxics review, and a toxics review will not be triggered with this application. The facility is subject to GACT 40 CFR Part 63 Subpart BBBBBB and does not require a permit to emit toxics. The facility is currently exempt from toxics regulations per 15A NCAC 02Q .0702 (a) and (c). Per 15A NCAC 02Q .0702(c), “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.” Terminals are not subject to toxics evaluations.

VIII. Facility Emissions Review

There are no actual emissions from the annual reporting inventories due to the fact that this is a 1st Time Title V permit.

IX. Compliance Status

On **March 19, 2021**, Maureen Conner of the RRO office conducted a full compliance evaluation of all four facilities (Kinder Morgan Southeast Terminals, LLC Selma 1, 2, 3 and 4). The conclusion from her inspection noted; “At the time of this inspection, Kinder Morgan Selma 1, 2, 3 and 4 appeared to be in compliance with all air quality requirements.”

Five year compliance history

The facility has not been sent any Notice of Violations and Deficiency in the last five years.

X. Other Regulatory Considerations

- An application fee of \$988.00 was received by the DAQ on July 15, 2020.
- The appropriate number of application copies was received by the DAQ.
- A Professional Engineer’s Seal was not required for this modification.
- A zoning consistency determination was not required for this modification.

- The application was signed by the Responsible Official, Mr. Wes Melton, Director of Operations, on June 29, 2020.
- 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 pursuant 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.

XI. Recommendations

The application for Kinder Morgan Southeast Terminals, LLC Selma 1, 2, 3, and 4 in Selma, Johnston County, North Carolina has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined that this facility is expected to comply with all requirements that are applicable to the affected sources. The DAQ recommends the issuance of Air Permit No. 04716T24.

Attachment A

February 18, 1998

4APT-ARB

Ms. Chun-chi S. Liu
Mecklenburg County
Department of Environmental Protection
700 N. Tryon Street, suite 205
Charlotte, North Carolina 28202-2236

Subject: Applicability Determination Request;
Definition of a "Major Source" under 40 CFR 70.2

Dear Ms. Liu:

Thank you for your letter of December 22, 1997 (enclosed for reference) in which you requested a written applicability determination from the Environmental Protection Agency (EPA) regarding the 40 CFR 70.2 definition of a "major source". Specifically, you asked if gasoline should be considered as petroleum in determining whether or not a source is "major" if the source is a bulk gasoline terminal.

As referenced in your letter, under the definition of "major source" in section 40 CFR 70.2, EPA lists 27 categories of sources which must aggregate their fugitive emissions toward title V applicability. For the most part, the listed categories are consistent with the named category list presented at 40 CFR 52.21 (b) (1) (i) (a) under the Prevention of Significant Deterioration (PSD) program. This letter will address gasoline/ fuel terminals as they may apply to the "(xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels" and "(xxvii) All other stationary source categories regulated by a standard promulgated under section 111 or 112 of the Act, but only with respect to those air pollutants that have been regulated for that category" source categories as listed under the major source definition in 40 CFR Part 70.

EPA has determined that the "(xxii)" source category, as listed under the major source definition in 40 CFR Part 70, does not extend to gasoline/ fuel terminals. Upon review of the term "petroleum" as defined in 40 CFR 60, Subparts J, K, Ka, and Kb, it is our determination that the named category was limited to crude oil and not its refined products (e.g., gasoline). With

respect to the "xxvii " source category, the Region has determined that fugitive emissions do not have to be aggregated toward title V applicability since the applicable regulation (40 CFR Part 60, subpart XX-Standards of Performance for Bulk Gasoline terminals) was promulgated after August 7 , 1980. As you know, your agency or any permitting authority may apply a stricter interpretation of the (xxii) source category and require that gasoline be considered toward the capacity limitation in order to determine whether fugitive emissions from gasoline should be aggregated in determining title V applicability.

Thank you for the opportunity to clarify this matter . If you have any further questions please contact Doug Deakin of my staff at (404) 562-9114.

Sincerely yours ,

R. Douglas Neeley
Chief
Air & Radiation Technology Branch
Air, Pesticides & Toxics
Management Division

Enclosures

Attachment B

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: September 9, 2008

Region: Raleigh Regional Office
County: Johnston
NC Facility ID: 5100135
Inspector's Name: Steven Carr
Date of Last Inspection: 05/15/2008
Compliance Code: 3/In Compliance - Inspection

Facility Data

Applicant (Facility's Name): Kinder Morgan Southeast Terminals LLC – Selma #1

Facility Address:
 Kinder Morgan Southeast Terminals LLC - Selma #1
 2200 West Oak Street
 Selma, NC 27576

SIC: 5171 / Petroleum Bulk Stations & Terminals
NAICS: 42471 / Petroleum Bulk Stations and Terminals

Facility Classification: Before: Synthetic Minor **After:** Synthetic Minor
Fee Classification: Before: Synthetic Minor **After:** Synthetic Minor

Permit Applicability (this application only)

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

Contact Data

Facility Contact	Authorized Contact	Technical Contact
William Fowler (919) 965-6043 2200 West Oak Street Selma, NC 27576	David Hildreth Director, Field Operations (770) 751-4107 1435 Windward Concourse Alpharetta, GA 30005	Robert Sullivan Sr. Environmental Engineer (770) 751-4140 1435 Windward Concourse Alpharetta, GA 30005

Application Data

Application Number: 5100135.08A
Date Received: 06/11/2008
Application Type: Modification
Application Schedule: State
Existing Permit Data
Existing Permit Number: 04716/R18
Existing Permit Issue Date: 02/22/2008
Existing Permit Expiration Date: 05/31/2011

Review Engineer: Amy Alexander

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

Comments / Recommendations:

Issue 04716/R19
Permit Issue Date: 09/09/2008
Permit Expiration Date: 05/31/2011

1. Purpose of Application:

Kinder Morgan – Selma #1 is a bulk petroleum terminal. The facility has submitted an application to modify the truck loading rack in their existing permit to allow for additional ethanol blending. Specifically, the requested modifications include installing two additional blend skids for blending ethanol with gasoline, blending ethanol for all gasoline arms, and loading and blending on all three lanes of the loading rack.

2. Application Chronology:

June 11, 2008 RRO received a request from Kinder Morgan for a permit modification. The application contained:

1. Two copies of required forms.
2. \$400.00 fee for modification to a synthetic minor air permit.

3. Zoning consistency determination from the Town of Selma.
4. Did NOT contain a completed Survey of Facility Reduction and Recycling Activities (Form A4).
5. Signature of a valid authorized official.

July 22, 2008 Phone conversation with Robert Sullivan explaining that the acknowledgement letter dated June 17, 2008 was mistakenly never mailed to facility. Explained that the application was not accepted because it was missing Form A4. Received completed Form A4 via fax.

August 14, 2008 Phone call to Robert Sullivan requesting clarification about some of the calculations. He explained that he no longer was the permit/technical contact for this facility and referred me to Cliff McCowan, the new permit/technical contact. Phone call to Cliff McCowan answered questions concerning the calculations.

August 19, 2008 Sent email to Cliff McCowan for an additional question regarding the maximum amount of gasoline to be blended with the ethanol. Also, requested contact info for him as the new permit/technical contact.

August 22, 2008 Received email from Andy Boddy (Delta Consultants), who had been forwarded the email by Cliff McCowan, answering the question concerning the amount of gasoline in the blended ethanol. He also sent an updated Form A1 with contact info for Cliff McCowan and the new invoice contact, Matthew Marra.

3. **New Equipment/Change in Emission and Regulatory Review:**

Requested modifications

The facility is requesting the following modifications to the truck loading rack (ES-Rack): installation of two additional blend skids for blending ethanol with gasoline, blending of ethanol to all gasoline arms, and loading and blending on all three lanes of the loading rack. Because the facility is not requesting any changes to the loading rack vapor combustor (CD-1) or the permitted throughput limits for gasoline, distillate, and ethanol loading, the facility's potential to emit should remain the same.

Equipment review

Based on the requested modifications, no changes to the permitted equipment list were needed.

Emissions review

The permit and Title V potential emission estimates shown in the table below for VOC and TAP/HAP are from the attached calculations spreadsheet. For truck loading emissions, the newly updated June 2008 version of EPA's AP-42 (Chapter 5.2, Transportation and Marketing of Petroleum Liquids) was used to estimate loading and fugitive losses. Fugitive losses were accounted for in both the uncontrolled and controlled emissions calculations. For gasoline loading, a controlled VOC emission factor of 50.99 mg/l gasoline loaded was used (35 mg/l limit + 15.99 mg/l fugitives). For ethanol and distillate loading, a destruction efficiency of 95.32% from the application was used to estimate controlled VOC emissions. Title V potential throughputs of each petroleum product were estimated in the application as 709,560,000 gal/yr, based on 9,000 gal/truck, 3 trucks/hr, and 3 loading lanes. As shown in the attached calculations, emissions from storage tanks were estimated using EPA's Tanks 4.0.9d and EPA's "Protocol for Equipment Leak Emission Estimates," as provided by the facility.

Vapor Combustion By-product Calculations:

By-product emissions from the vapor combustor have not been accounted for in the past several permit reviews and the application did not contain any by-product emissions data. Therefore, emission factors for industrial flares from Table 13.5-1 of EPA's AP-42 were used to estimate NO_x and CO emissions. The maximum heat input rate for the vapor combustor is 54,000 Btu/hr. Title V potential emissions are zero because they represent uncontrolled emissions when the vapor combustor is not in use.

Permit Potential:

$$\text{NO}_x = (54,000 \text{ Btu/hr}) * (0.068 \text{ lb}/10^6 \text{ Btu}) * (\text{ton}/2,000 \text{ lbs}) * (8,760 \text{ hrs/yr}) = 0.02 \text{ tpy}$$

$$\text{CO} = (54,000 \text{ Btu/hr}) * (0.37 \text{ lb}/10^6 \text{ Btu}) * (\text{ton}/2,000 \text{ lbs}) * (8,760 \text{ hrs/yr}) = 0.09 \text{ tpy}$$

Emissions Review

Pollutant	Permit Potential Emissions (tpy)	Title V Potential Emissions (tpy)
NO_x	0.02	0
CO	0.09	0
VOC	88.85	4,099
Total TAP/HAP	2.44	111.63

Regulatory review

The following permit conditions were removed, added, or revised:

1. 2D .0605 NSPS Performance Testing Requirement – This requirement was removed from the permit because results from the July 15, 2008 performance test were received by the RRO office on August 13, 2008. DAQ’s Stationary Source Compliance Branch is currently reviewing the test results. It is expected that the results will be approved by DAQ because it shows a VOC emission rate of 28 mg/l, which is below the limit of 35 mg/l, and meets all the criteria for an EPA-approved test.
2. 2D .0611 Vapor Combustor Requirements – The inspection, maintenance, and recordkeeping requirements for the vapor combustion unit were moved under 2Q .0315, Synthetic Minor Facilities, because the vapor combustor is needed to keep VOC emissions below the 100 tpy limit.
3. 2D .0940 Determination of Leak Tightness and Vapor Leaks – This requirement is applicable to this facility but was missing from the current permit, so a permit condition was added to the new permit.
4. 2D .1111 Maximum Achievable Control Technology – As a bulk gasoline terminal, all the permitted equipment at this facility (loading rack and storage tanks) are subject to the Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities NESHAP (Subpart BBBBBB). The required compliance date for this regulation is January 10, 2011. A permit condition was added for this regulation.
5. 2Q .0315 Synthetic Minor Facilities – The vapor combustor requirements from 2D .0611 were moved to this requirement (see #2 above). Also, a reporting requirement for the vapor combustor recordkeeping activities was added to be consistent with permits for similar gasoline terminals using vapor combustion units.

4. NSPS, NESHAP, PSD, and Attainment Status:

This facility is subject to two NSPS requirements, Standards of Performance for Volatile Organic Liquid Storage Vessels (Subpart Ka) and Standards of Performance for Bulk Gasoline Terminals (Subpart XX), which were included in the current permit. This minor modification to the loading rack does not affect either NSPS. This facility is subject to a new NESHAP, Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities (Subpart BBBBBB). Requirements for this NESHAP were added to the new permit.

This facility is not subject to PSD because facility-wide controlled Title V potential VOC emissions are below 250 tpy. Controlled maximum potential emissions are used for PSD applicability because the vapor combustion unit is required by the regulations pertaining to this facility.

This facility is located in Johnston County, which is currently in attainment for all pollutants.

5. Facility Wide Air Toxics:

This bulk gasoline terminal facility is exempt from air toxics, per 2Q .0702(a)(28).

6. Compliance Status:

Facility was found to be in compliance during the most recent inspection on May 15, 2008 by Steve Carr.

7. Facility Emissions Review:

See the emissions review in Section 3 above for the assumptions and calculations used to estimate facility-wide emissions. According to these calculations, this facility should remain classified as a synthetic minor.

Facility Emissions Summary

Pollutant	Permit Potential Emissions (tpy)	Title V Potential Emissions (tpy)
NO_x	0.02	0
CO	0.09	0
VOC	88.85	4,099
Total TAP/HAP	2.44	111.63

8. Summary of Permit Changes:

- As shown in Form AA of the permit application, the facility name was changed from “Kinder Morgan Southeast Terminals - Selma Terminal 1” to “Kinder Morgan Southeast Terminals LLC - Selma #1.”
- Revised format of 2D .0524, Subpart XX, to make it easier to read.
- Removed 2D .0605, NSPS Performance Testing Requirement, because the test results were received by the RRO office on August 13, 2008 and are currently being reviewed by DAQ’s Stationary Source Compliance Branch.
- Moved 2D .0611, Vapor Combustor Requirements, to 2Q .0315, Synthetic Minor Facilities, because the vapor combustor is needed to keep VOC emissions below the 100 tpy limit.
- Added 2D .0940, Determination of Leak Tightness and Vapor Leaks, to reflect current requirements.
- Added 2D .1111, Maximum Achievable Control Technology, for Subpart BBBBBB-Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.
- Revised 2Q .0315, Synthetic Minor Facilities, to incorporate vapor combustor requirements from 2D .0611, and added a reporting requirement for the vapor combustor recordkeeping activities to reflect current requirements.

9. Conclusions, Comments, and Recommendations:

Recommend issuance of revised air permit 04716R19 showing the changes identified above.

Permits Coordinator: _____ Date:
 Charles McEachern, PE

AQ Supervisor: _____ Date:
 Patrick Butler, PE

Attachment C

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Raleigh Regional Office
County: Johnston
NC Facility ID: 5100200
Inspector's Name:
Date of Last Inspection:
Compliance Code: /

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Kinder Morgan Southeast Terminals - Selma Terminal #2</p> <p>Facility Address: Kinder Morgan Southeast Terminals - Selma Terminal #2 2101 West Oak Street Selma, NC 27576</p> <p>SIC: 5171 / Petroleum Bulk Stations & Terminals NAICS: 42471 / Petroleum Bulk Stations and Terminals</p> <p>Facility Classification: Before: <BFacClass> After: <AFacClass> Fee Classification: Before: <BFeeClass> After: <AFeeClass></p>			<p>SIP: 2D .0521, .0535, .0540, .1806, and 2Q .0315 NSPS: n/a NESHAP: n/a PSD: n/a PSD Avoidance: n/a NC Toxics: no 112(r): no Other: none</p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 5100200.08A Date Received: 01/24/2008 Application Type: Greenfield Facility Application Schedule: State</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: <Permit Number> Existing Permit Issue Date: <XPIssDate> Existing Permit Expiration Date: <XPExpDate></p>
Jerry Fowler (919) 965-5232 2200 West Oak Street Selma NC, 27576	David Hildreth Director - Field Operations (770) 751-4107 1100 Alderman Drive Alpharetta GA, 30005	Robert Sullivan Sr. Environmental Engineer (770) 751-4140 1100 Alderman Drive Alpharetta GA, 30005	
<p>Review Engineer: Dena Pittman</p> <p>Review Engineer's Signature: _____ Date: _____</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue <New Permit Number> Permit Issue Date: Permit Expiration Date:</p>	

- 1. Purpose of Application:**
 Kinder Morgan Southeast Terminals – Selma Terminal #2 will be a bulk denatured ethanol distribution terminal in Johnston County. The facility has submitted a Greenfield application to operate an ethanol bulk distribution facility that will consist of a loading rack and storage tank (2,170,000 gallon capacity). The application is for a synthetic minor and requests a limit of 153,300,000 gallons of denatured ethanol throughput.
- 2. Application Chronology:**

January 24, 2008	RRO received a request from Kinder Morgan Southeast Terminal to modify their permit.
January 28, 2008	Acknowledgement letter was sent to the facility.

February 22, 2008 contacted Bob Sullivan concerning the date the tanks were installed.
 February 26, 2008 received email from Bob Sullivan that the Tank 21 and Tank 22 were erected at Selma Terminal in 1974 and that Tank 22 was planned for demolition.

3. New Equipment/Change in Emission and Regulatory Review:

The following stipulations have been included in this permit:

2D .0521, .0535, .0540, .1806, and 2Q .0315 (throughput limit of 153,300,000 gallons of ethanol) for the permitting of Loading Rack (ES-Rack)

2D .0521, Control of Visible Emissions –

Visible emissions from the permitted air emission sources shall not be more than 20 percent opacity. *Compliance to be determined during inspection.*

2D .0535, Notification Requirement - DAQ must be notified if a source of excess emissions exceeds limits for more than four hours. *Compliance to be determined during inspection.*

2D .0540, Fugitive Dust Emissions- (per current DAQ policy for all facilities)

Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. *Compliance to be determined during inspection.*

2D .1806, Control of Prohibition of Odorous Emissions-

Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary. *Compliance to be determined during inspection.*

2Q .0315, Synthetic Minor-

To avoid Title V applicability for VOC emissions above 100 tpy threshold facility has requested ethanol throughput limit of 153,300,000 gallons/yr. Emissions from this throughput limitation are well below the 100 tpy limit; however, the facility requested the throughput limit. *Compliance to be determined during inspection and annual report submittal.*

Ethanol Throughput: Potential

No. of racks =	1
No. of fill ups / hr =	6
operating hrs / yr =	8760
truck cap. gal/fill up =	9000
gallons / yr	473,040,000

Ethanol Throughput: Synthetic Minor

153,300,000

AP-42 Table 5.2-5 and 5.2-1 for Submerged Loading, Vapor Balance Service

Eqn. 1 Loading Loss (L) = $[12.46 * S * P * M * (1 - \%eff/100)] / T$

S =	1
P =	0.67 psia
M =	46.07 lb/lb-mole
T =	520 R

VRU destruction efficiency ^b = 0%
 loading loss factor L = 0.73962 lb/1000 gal loaded

Potential VOC = 473,040,000 gal * 0.74 lb/1000 gal loaded = 350,050 lb/yr (175 tpy)
 Actual VOC = 153,300,000 gal * 0.74/1000 = 113,242 lb/yr (56.6 tpy)

Per application:

HAP/TAP	% of Total VOC provided by KinderMorgan	Title V Potential Emissions, lbs/yr	Permit Potential emissions, lb/yr
Benzene	0.09	315.9	102.4
Cumene	0.025	87.7	28.4
Ethylbenzene	0.07	245.7	79.6
Hexane	0.05	175.5	56.9
Toluene	0.35	1228.4	398.1
Xylene	0.35	1228.4	398.1
Total		3281.5 (1.64 tpy)	1063.5 (0.53 tpy)

Facility Emissions Summary

Pollutant	Emissions at Synthetic Minor Limits (153,300,000 gallons/yr) (tpy)	Title V Emissions (tpy)
VOC	56.6 + 0.45 = 57	175 + 1 = 176
HAPs	0.54	1.64

Insignificant / Exempt Activities

Source	Exemption Regulation
IES-Tank A1 - red dye storage tank (300 gallon capacity)	2Q .0102 (c)(2)(A)(i)
IES-Tank U1 - slop/knockout tank (2,000 gallon capacity)	2Q .0102 (c)(1)(F)
IES-Tank 21 - internal floating roof tank for storage of denatured ethanol (2,170,000 gallon capacity) (VOC = 894 lbs/yr (0.45 tpy from TANKS pgm for 153,300,000 gal throughput; therefore ~ 1 tpy VOC for potential 473,040,000 gal)	2Q .0102 (c)(1)(D)(ii)

4. NSPS, NESHAPS, PSD, and Attainment Status:

NSPS

Both tanks Tank 21 and Tank 22 were constructed in 1974. Therefore, these tanks are not regulated under 40 CFR 60 Subpart Ka or Kb since they were constructed prior to the applicability dates required for each of these regulations.

NESHAPS and PSD not applicable.

Johnston County is in non-attainment for ozone.

5. Facility Wide Air Toxics:

Per DAQ regulations under 2Q .0704, New Facilities, a facility must trigger a permit under a 2D regulation to be regulated for toxics. The facility does not trigger air toxics because this is a greenfield facility that has triggered a permit under a 2Q regulation (2Q .0315- Synthetic Minor) and not a 2D regulation.

The facility emits the following toxics: benzene, hexane, toluene and xylene, but benzene is the only toxic that appears to be emitted above its de minimus value.

Per application:

TAP	De minimus			Title V Potential Emissions, lbs/yr	Permit Potential emissions, lb/yr
	Lb/hr	Lb/day	Lb/yr		
Benzene			8.1	315.9	102.4
Hexane		23		175.5	56.9
Toluene	14.4	98		1228.4	398.1
Xylene	16.4	57		1228.4	398.1

6. Compliance Status:

The facility is a Greenfield facility. Therefore there is no compliance history.

7. Facility Emissions Review:

Facility Emissions Summary

Pollutant	Emissions at Synthetic Minor Limits (tpy)	Title V Emissions (tpy)
VOC	57	176
HAPs	0.54	1.64

The facility is correctly defined as a Synthetic Minor.

8. Stipulation Review:

The following stipulations have been included in this permit:

2D .0521, .0535, .0540, .1806, and 2Q .0315 (throughput limit of 153,300,000 gallons of ethanol) See Section 3.

9. Conclusions, Comments, and Recommendations:

Recommend issuance of air permit No. 09874R00.

Permit Coordinator: _____ Date:
 Charles McEachern, PE

Acting DAQ Supervisor: _____ Date:
 Shelia Holman

Attachment D

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Johnston
NC Facility ID: 5100116
Inspector's Name: Thomas Harris
Date of Last Inspection: 06/08/2016
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Kinder Morgan Southeast Terminals LLC

Facility Address:

Kinder Morgan Southeast Terminals LLC
 4383 Buffalo Road
 Selma, NC 27576

SIC: 5171 / Petroleum Bulk Stations & Terminals

NAICS: 42471 / Petroleum Bulk Stations and Terminals

Facility Classification: Before: Synthetic Minor **After:**

Fee Classification: Before: Synthetic Minor **After:**

Permit Applicability (this application only)

SIP:

NSPS:

NESHAP:

PSD:

PSD Avoidance:

NC Toxics:

112(r):

Other:

Contact Data

Application Data

Facility Contact	Authorized Contact	Technical Contact
Brian Pilkington Terminal Superintendent (919) 965-6043 P.O. Box 66 Selma, NC 27576	Robert McKinley Operations Manager (804) 743-5723 1000 Windward Concourse, Suite 450 Alpharetta, GA 30005	Johnny Tapia Senior EHS Specialist (704) 249-9936 502 Tom Sadler Road Charlotte, NC 28214

Application Number: 5100116.16B

Date Received: 09/27/2016

Application Type: Modification

Application Schedule: State

Existing Permit Data

Existing Permit Number: 04337/R20

Existing Permit Issue Date: 02/19/2016

Existing Permit Expiration Date: 04/30/2017

Review Engineer: Charles McEachern

Review Engineer's Signature:

Date:

Comments / Recommendations:

Issue 04337/R21

Permit Issue Date:

Permit Expiration Date:

1. Purpose of Application:

Kinder Morgan Southeast Terminals (KMST) is a terminal company located in Johnston County that has submitted an application to revise their air permit by adding a 3rd loading bay to the truck loading rack, installing a new 10,000 gallon additive tank, begin storing gasoline in two existing tanks, construct a new 80,000 barrel gasoline storage tank, upgrade the VCU capacity, and increase the amount of gasoline and ethanol allowed by the synthetic minor condition.

2. Application Chronology:

- 09/27/2016 Received a complete application including properly signed forms, request for zoning consistency determination, and \$400.00 processing fee.
- 11/30/2016 E-mail exchanged with Johnny Tapia regarding permit issuance schedule. I also requested clarification whether the existing VCU is being modified or replaced, and requested manufacturer's information.
- 12/01/2016 E-mail received from Johnny Tapia with replacement VCU specifications. Since this is a new unit he agreed to change the ID No. to CD-VCU-1.
- 12/07/2016 Draft air permit sent to Johnny Tapia for review.
- 12/08/2016 Telephone conversation with Johnny Tapia concerning the draft permit. Johnny questioned whether NSPS Kb applies to Tanks T-2, T-5, and T-6. He will research when they were modified to see if anything changed after 1984 that would trigger Kb. He also questioned the requirement to submit an annual summary of the I&M log kept for the VCU, and I agreed that this isn't needed and will remove it from the draft permit. Finally, he requests the ID number for T4 be changed to T-4.
- Follow up e-mail from me that the NSPS 60.7 notice of construction and startup have been added to the NSPS Kb condition, and asking if the insignificant tank, ID. I-T-7 should be renamed I-A-7?
- 12/09/2016 Johnny Tapia e-mails to say tank I-T-7 should be renamed I-A5.

3. New Equipment/Change in Emission and Regulatory Review:

Numerous changes are planned for the facility as follows:

A. Add a 3rd loading bay to the truck loading rack (LR-1), upgrade VCU capacity (VCU-1), and increase allowable throughput in the synthetic minor condition

The addition of a third loading bay will allow the facility to process more gasoline and ethanol. With this, KMST also requests increasing the synthetic minor limit of 300,000,000 gallons of gasoline loaded per year to 430,000,000 gallons of gasoline and ethanol loaded, combined, per year. The equipment list will be modified as follows:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
LR-1 (NSPS,NESHAP)	bottom-loading rack (consisting of two <u>three</u> loading bays)	CD-VCU CD-VCU-1	vapor combustion unit

The addition of the third lane increases the loading rack’s throughput potential to 946,800,000 gallons per year (3,584,027,877 liters), and the potential allowable VOC emission at the NSPS Subpart XX limit of 35 mg/l loaded increases to 138 tons per year (tpy).

The VCU will be replaced with a John Zink unit which has a guaranteed emission rate not to exceed 10 mg per liter loaded. At 10 mg/l loaded, the restricted throughput of 430,000,000 gallons per year (1,627,727,067 liters) results in a permitted potential VOC emission of 32.2 tpy. Additionally, NOx emissions are guaranteed not to exceed 4 mg/l loaded, and CO will not exceed 10 mg/l loaded. The VOC emission rate will be verified through a stack test for compliance with NSPS Subpart XX.

Pollutant	Title V Emissions based on NSPS allowable (tpy)	Permit Potential Emissions based on manufacturer’s 10mg/l guarantee and 430,000,000 gallon throughput limit (tpy)
VOC	138	32.2
NOx	N/A	12.9
CO	N/A	32.2

Applicable regulations include:

2D .0516, Sulfur Dioxide Emissions for Combustion Devices, which requires SO2 emissions not exceed 2.3 lb/mmBtu heat input. Since the VCU is fired on gasoline vapors, which are inherently low in sulfur, compliance with this rule is expected.

2D .0524, NSPS Subpart XX is triggered by the modification to the loading rack and requires the VOC emission not exceed 35 mg/l gasoline loaded. The modified loading rack is expected to comply due to the upgraded VCU, and will be verified during the required performance test.

2D .0927, Bulk Gasoline Terminals, which requires the facility meet the 35 mg/l loaded standard and monitor the loading rack operations to ensure VOC is being captured by the control system. Compliance is expected based on the loading rack upgrades and the facility’s prior compliance with this requirement, and will be verified by the NSPS testing.

2D .1111, NESHAP Subpart BBBBBB applies to this facility and compliance is demonstrated by following 2D .0927. Continued compliance is expected.

2Q .0315, Synthetic Minor Facilities, applies to this modification which increases throughput capacity and VOC emission potential. With the requested throughput limit of 430,000,000 gallons of gasoline and ethanol, combined, per year, along with the VOC emission limit of 10 mg/l loaded, permitted potential emission does not exceed 100 tpy VOC. The restriction includes a requirement to inspect and maintain the VCU and maintain records. Records of throughput will also be maintained and reported annually along with total VOC emission.

B. New additive storage tank (10,000 gallon capacity, ID No. I-A6)

As a tank not subject to any requirements other than Stage I for gasoline, this tank is exempted under 15A NCAC 2Q .0102(g)(4), and will be added to the “Insignificant / Exempt Activities” list attached to the permit.

C. Begin storing gasoline in Tank #1 and Tank #4

Two tanks currently listed as insignificant sources will be moved to the permitted equipment list in order to store gasoline. Their changes are described as follows:

- The insignificant tank described as “I-T-1 - internal pan type floating roof installed on a fixed-roof diesel fuel, No. 2 fuel oil, kerosene, or Jet A fuel storage tank (840,000 gallon capacity, constructed 1968)” will have “gasoline” added to the list of allowable stored fuels, and the “I” will be removed from the ID number.
- The insignificant tank described as “I-T4 - fixed-roof diesel fuel, No. 2 fuel oil, kerosene, or Jet A fuel storage tank (840,000 gallon capacity, constructed in 1968)” will have “internal pan type floating roof installed on a” added to the description, along with “gasoline” added as an allowable stored fuel type, and “I” removed from the ID number. This tank will be modified by the addition of an internal floating roof.

VOC emissions are calculated by the applicant using AP-42 as 2.37 tpy for T-1 and 3.41 tpy for T-4.

Applicable regulations include:

2D .0524, NSPS 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, is triggered by the modification of Tank T-4 by the addition of an internal floating roof. 40 CFR 60.112b specifies how the floating roof is to be sealed, and 60.113b requires visual inspection of the roof and seals and measurement of the seal gaps with reporting as the “stack test.” 60.115b requires submission of a report showing the equipment meets the requirements of 60.112b and 60.113b, and maintenance of inspection records for at least 2 years.

2D .0925, Petroleum Liquid Storage in Fixed Roof Tanks, which requires installation of an internal floating roof (already installed for T-1) if the vapor pressure

of the stored VOC is above 1.52 psia (gasoline is 9.0 psia). Records of inspection of the floating roof and other components' seals is required along with product throughputs. Compliance is expected based on the current compliance status of the facility with their three similarly regulated storage tanks, ID Nos. T-2, T-5, and T-6.

2D .1111, NESHAP Subpart BBBBBB applies to this facility and compliance is demonstrated by following 2D .0927. Compliance is expected.

D. New gasoline storage tank (80,000 barrel capacity)

KMST proposes to construct an internal pan type floating roof installed on a fixed-roof gasoline, ethanol, diesel fuel, No. 2 fuel oil, kerosene, or Jet A fuel storage tank (3,360,000 gallon capacity, constructed 2017)(ID No. T-7)

Emissions are calculated using AP-42 as 6.93 tpy VOC.

Applicable regulations include:

2D .0924, NSPS 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, which is triggered by the construction of Tank T-7. Requirements are the same as discussed above for Tank T-4.

2D .0925, Petroleum Liquid Storage in Fixed Roof Tanks, which requires installation of an internal floating roof (already installed) if the vapor pressure of the stored VOC is above 1.52 psia (gasoline is 9.0 psia). Records of inspection of the floating roof and other components' seals is required along with product throughputs. Compliance is expected based on the current compliance status of the facility with their three similarly regulated storage tanks, ID Nos. T-2, T-5, and T-6.

2D .1111, NESHAP Subpart BBBBBB applies to this tank and compliance is demonstrated by following 2D .0524 (NSPS Subpart Kb), and 2D .0925. Compliance is expected.

E. Change facility name

The facility name changes from Kinder Morgan Southeast Terminals LLC to Kinder Morgan Southeast Terminals LLC - Selma 3 Terminal.

4. NSPS, NESHAPS, PSD, and Attainment Status:

The loading rack and storage tanks T-5, T-6, T-2, T-1, T4, and T-7 are subject to NESHAPS Subpart BBBBBB. The tanks T-4 and T-7 are subject to NSPS Subpart Kb, and the loading rack is subject to NSPS Subpart XX. The facility has not triggered PSD and is located in Johnston County which is in attainment.

5. Facility Wide Air Toxics:

An air toxics review is not triggered for a bulk terminal.

6. Compliance Status:

The facility received a NOD for failure to provide the NSPS notification of startup of the loading rack.

7. Facility Emissions Review:

The Title V emissions are based on 8760 hours of operation per year, an annual rack throughput of 946,800,000 gallons, the NSPS allowable emission rate for the loading rack (LR-1) of 35 mg/l loaded, and AP-42 for the storage tanks.

Permit Potential emissions include the synthetic minor restriction of 430,000,000 gallons per year throughput and 10 mg/l loaded as the maximum VOC emission rate of the rack (LR-1).

Pollutant	Title V Emissions (tpy)	Permit Potential Emissions (tpy)
VOC	165.	58.9
NOx	28.4	12.9
CO	70.9	32.2

Based on the emissions summary, this facility is correctly classified as a Synthetic Minor for fee purposes.

8. Summary of Permit Changes:

- Added a third lane to the Loading Rack, ID No. LR-1, and replaced the previous VCU, ID No. CD-VCU, with a new one, ID No. CD-VCU-1.
- Added a 10,000 gallon additive storage tank (I-A6) to the “Insignificant / Exempt Activities” list.
- Moved tanks I-T-1 and I-T4 from the “Insignificant / Exempt Activities” list to the permitted equipment list and added “gasoline” to the materials allowed for storage. Also added “internal floating roof” to tank T4 and changed its ID number to T-4, and removed “I” from the ID number of each tank.
- Renamed I-T-7 to I-A5.
- Added an internal pan type floating roof installed on a fixed-roof gasoline, ethanol, diesel fuel, No. 2 fuel oil, kerosene, or Jet A fuel storage tank (3,360,000 gallon capacity, constructed 2017)(ID No. T-7) to the permitted equipment list.
- The NSPS Subpart XX condition is updated to show startup notice required when the third lane of the loading rack (LR-1) is installed, and requires a stack test be performed within 180 days. This test will also be used to verify the control device (CD-VCU-1) meets the 10 mg/l limit in the synthetic minor condition.
- Added a 2D .0605 testing requirement to demonstrate the 10 mg/l loading rack (LR-1) emission rate.
- Added NSPS Kb condition applicable to Tank T-4 and T-7.
- Updated the 2D .0521 condition to show the modified loading rack (LR-1) is subject to 20% opacity, and no longer subject to the 40% standard.

- Modified the synthetic minor condition by increasing the allowable throughput of gasoline and ethanol, combined, to 430,000,000 gallons per year and including a 10 mg/l loaded limit for the loading rack emissions.
- Changed the facility name from Kinder Morgan Southeast Terminals LLC to Kinder Morgan Southeast Terminals LLC - Selma 3 Terminal.
- Updated the insignificant activities rule reference to reflect the rule revisions as of June 13, 2016.

9. Conclusions, Comments, and Recommendations:

Recommend issuance of revised air permit No. 04337R21.

Note to permit engineers: 2D .0605 and 2D .0524, NSPS XX, are modified in MS Word to remove the 60 day testing window (only 180 applies for modifications). When the testing language is no longer needed, use the NSPS XX condition from R20.

Permit Coordinator: _____ **Date:**
Charles McEachern, PE

Regional Supervisor: _____ **Date:**
Patrick Butler, P.E.

Attachment E

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Johnston
NC Facility ID: 5100041
Inspector's Name: Matthew Mahler
Date of Last Inspection: 07/19/2016
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Kinder Morgan Southeast Terminals - Selma 4 Terminal</p> <p>Facility Address: Kinder Morgan Southeast Terminals - Selma 4 Terminal 4086 Buffalo Road Selma, NC 27576</p> <p>SIC: 5171 / Petroleum Bulk Stations & Terminals NAICS: 42471 / Petroleum Bulk Stations and Terminals</p> <p>Facility Classification: Before: Synthetic Minor After: Synthetic Minor Fee Classification: Before: Synthetic Minor After: Synthetic Minor</p>			<p>SIP:</p> <p>NSPS:</p> <p>NESHAP:</p> <p>PSD:</p> <p>PSD Avoidance:</p> <p>NC Toxics:</p> <p>112(r):</p> <p>Other:</p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 5100041.16A Date Received: 09/27/2016 Application Type: Modification Application Schedule: State</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: 02584/R14 Existing Permit Issue Date: 09/11/2015 Existing Permit Expiration Date: 08/31/2023</p>
Brian Pilkington Terminal Superintendent (919) 965-6043 P.O. Box 66 Selma, NC 27576	Robert McKinley Operations Manager (804) 743-5723 2000 Trenton Avenue Richmond, VA 23234	Johnny Tapia Senior EHS Specialist (704) 249-9936 502 Tom Sadler Road Charlotte, NC 28214	
<p>Review Engineer: Dena Pittman</p> <p>Review Engineer's Signature: _____ Date: _____</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 02584/R15 Permit Issue Date: _____ Permit Expiration Date: _____</p>	

- 1. Purpose of Application:**
 Kinder Morgan Southeast Terminals operates bulk terminals in Selma. The purpose of this application is to add a new 20,000-barrel ethanol tank, adding gasoline to the list of fuels that can be stored in tank 201, and to request an increase in the permitted gasoline throughput at the loading rack.
- 2. Application Chronology:**

September 27, 2016	An application packet was received at the RRO. The packet contained a signed AA form, supporting forms and calculations, a check (No. 283235) in the amount of \$400 for the application fee, and a
September 28, 2016	An acknowledgement letter was sent to Mr. Robert McKinley, Operations Manager, noting the application was complete and had been accepted for processing.

November 4, 2016

I sent an email to Mr. Tapia concerning the following items:

- The application notes the construction date for T-201 as 1968 with modification 2016. The current permit has the construction date as 1964.
- Also what type of construction was necessary in 2016?

In a phone conversation with Mr. Tapia he said that the construction date for T-201 was 1964. There is no construction in 2016 just the modification to add gasoline as a fuel option for storage. In addition, I asked about the new tank. Is it only to store denatured ethanol? He said they want the option to store any fuel (as noted on the A2 form). I asked Mr. Tapia if he understood what the information provided in the center column was? He said he did not and that he would send a revised D4 form.

An email was received that had the revised D4 form attached.

I sent another email about whether the Tank ID should begin with a "T-" or just list the tank number.

Mr. Tapia responded to keep it consistent with the way it is in the permit.

November 10, 2016

I sent an email to Mr. Tapia asking if the external floating roof tank has a geodesic dome or roof over it. Mr. Tapia responded that it does not have a dome or other additional roof. I sent a response email to check out 2D .0927 (f), which requires a self-supporting roof be installed.

November 21, 2016

An email was received from Johnny Tapia with the revised Tank 201 information. A geodesic dome will be installed over this unit.

December 2, 2016

I sent an email to Mr. Tapia asking if the cost of the geodesic dome exceeds 50% of the cost of a new tank. Note: This is to determine if the unit will need to be regulated as NSPS. I received an email response that the cost would be less than 50%.

Note: Per a letter dated October 27, 2009 from the EPA, concerning tanks at a nearby TransMontaigne facility, it was determined that installing a geodesic dome over an external floating roof turns the tank into an internal floating roof tank. So this tank will now be considered a fixed roof tank with an internal floating roof.

3. New Equipment/Change in Emission and Regulatory Review:

The facility submitted this application to add a new 20,000-barrel tank, to allow storage of gasoline in tank 201, and to increase the permitted gasoline throughput at the loading rack.

Emission Source ID	Emission Source Description	Control System ID	Control System Description
201 (NESHAP)	external floating roof fixed roof with an internal floating roof (of welded construction, having mechanical shoe primary seal and a shoe mounted secondary seal) gasoline, diesel, and kerosene storage tank (23,922-barrels shell capacity, Date of construction 1964)	N/A	N/A

Emissions Review:

Loading Rack:

Permit Potential emissions from the loading rack increasing from 180,000,000 gallons to 300,000,000 gallons for a net increase of 17.5 tons per year of VOC emissions.

$$\begin{aligned} 180,000,000 \text{ gal/yr} * 3.785 \text{ L/gal} * 35 \text{ mg/L} * 1 \text{ g/1000 mg} * 1 \text{ lb/453.6 grams} &= \\ &= 52,569 \text{ pounds /year} \\ &= 26.3 \text{ tons/year} \end{aligned}$$

$$\begin{aligned} 300,000,000 \text{ gal/yr} * 3.785 \text{ L/gal} * 35 \text{ mg/L} * 1 \text{ g/1000 mg} * 1 \text{ lb/453.6 grams} &= \\ &= 87,616 \text{ pounds /year} \\ &= 43.8 \text{ tons/year} \end{aligned}$$

Tank (ID No. 201): Addition of gasoline to the list of products allowed for storage. From the application the VOC emissions from this tank are 21,576 pounds per year (10.8 tpy). From the Revision 13 permit, the emissions from this tank were noted as 0.38 tpy. Therefore, this is an increase of 10.42 tpy.

Regulatory Review: ID No. 201 is applicable to 2D .0521, 2D .0535, 2D .0540, NESHAP Subpart BBBB, 2D .0925, 2D 1806, and 2Q .0315. 2D .0927 and 2D .0932 are applicable to the loading rack and vapor combustion unit. The only change with the increase in gasoline throughput is stipulation 2Q .0315. Tank ID No. I-203 is an insignificant source per 2Q .0102 (g)(4)

2D .0925, Petroleum Liquid Storage in Fixed Roof Tanks – The tank shall be operated with the appropriate seals and maintenance. Routine visual inspections shall be completed, as well as a complete inspection of the cover and seal whenever the tank is emptied. Records shall be kept of all required inspections, monthly storage temperature, throughput and types of petroleum liquid stored, and true vapor pressure of the liquid stored. *Compliance to be determined during inspection.*

2D .1111, NESHAP Subpart BBBB – The facility shall comply with all provisions of the Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities MACT. This subpart establishes national emissions limitations and management practices (spill reduction and required inspections) for HAPs emitted from gasoline bulk storage terminals, bulk plants, and pipeline facilities. *Compliance to be determined during inspection.*

2Q .0315 – Synthetic Minor Condition – The facility is limited to 100 tons of VOCs per consecutive 12-month period. Gasoline throughput shall be increased from 180,000,000 gallons to 300,000,000 gallons. Emissions shall be controlled by a vapor combustion unit and the facility shall keep all records and submit annual reports. Recordkeeping requirements will be checked during facility inspections and when annual reports are submitted to DAQ. *Compliance to be determined during inspection.*

Facility-wide applicability:

2D .0521, Visible Emissions Control Requirement –need to meet the 20% opacity limit for emission sources manufactured after July 1, 1971. *Compliance to be determined during inspection.*

2D .0535, Notification Requirement – Permittee must notify DAQ if a source of emissions last for more than four hours and that results from a malfunction, breakdown of process or control equipment or any other abnormal conditions. *Compliance to be determined during inspection.*

2D .0540, Fugitive Dust Emissions - to address the control of fugitive dust from leaving the property. *Compliance to be determined during inspection.*

2D .1806, Control and Prohibition of Odorous Emissions - addresses preventing objectionable odors from extending beyond the facility's boundary. *Compliance to be determined during inspection.*

Insignificant / Exempt Activities: Updated the insignificant/exempt sources with the new exemptions per regulation change effective June 13, 2016 for 2Q .0102. From the application the VOC emissions from the addition of I-203 is 886.8 pounds per year (0.44 tons per year). The emissions were calculated using AP-42 Chapter 7.1.

Source	Old Exemption Regulation	New Exemption Regulation
I-011 - ethanol storage tank (20,000 gallon capacity)	2Q .0102 (c)(1)(D)(ii)	2Q .0102 (g)(4)
I-012 - ethanol storage tank (20,000 gallon capacity)	2Q .0102 (c)(1)(D)(ii)	2Q .0102 (g)(4)
I-001 - lubricity additive storage tank (10,000 gallon capacity)	2Q .0102 (c)(1)(D)(i)	2Q .0102 (g)(4)
I-002 - gasoline additive storage tank (9,800 gallon capacity)	2Q .0102 (c)(1)(D)(i)	2Q .0102 (g)(4)
I-OWS - Oil/water separator (3,000 gallon capacity)	2Q .0102 (c)(1)(L)(xii)	2Q .0102 (g)(14)(B)
I-003 - gasoline additive storage tank (2,000 gallon capacity)	2Q .0102 (c)(1)(D)(i)	2Q .0102 (g)(4)
I-004 - red dye tote (500 gallon capacity)	2Q .0102 (c)(1)(D)(i)	2Q .0102 (g)(4)
I-201 - external floating roof (of welded construction, having mechanical shoe primary seal and a shoe mounted secondary seal) diesel and kerosene storage tank (23,922 barrels shell capacity, Date of construction 1964)	2Q .0102 (c)(1)(D)(i)	Moved to permitted equipment list.
I-403 - fixed roof diesel and kerosene storage tank (42,757 barrels shell capacity, Date of construction 1964)	2Q .0102 (c)(1)(D)(i)	2Q .0102 (g)(4)
I-203 - internal pan type floating roof installed on a fixed-roof denatured ethanol, diesel fuel, No. 2 fuel oil, kerosene, or Jet A fuel storage tank (840,000 gallon capacity, constructed date 2016)	NA	2Q .0102 (g)(4)

4. NSPS, NESHAPS, PSD, and Attainment Status:

NSPS:

- Subpart K (ID No. 202) and Subpart XX (ID No. ES-1 controlled by ID No. VCU-1) are applicable to this facility.

NESHAPS:

- Subpart BBBB, Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities, is applicable to this facility (loading rack and tanks that contain gasoline)

This facility is a minor source for PSD purposes. 112r does not apply to this company. Johnston County is in attainment.

5. Facility Wide Air Toxics:

A toxics evaluation was not triggered by this modification. Terminals are not subject to toxics evaluations.

6. Compliance Status:

The facility appeared to be in compliance during the last inspection on July 19, 2016 by Matthew Mahler.

7. Facility Emissions Review:

Tanks	VOC Emissions
	tpy
201	10.8
202	2.4
203	0.4
401	1.8
402	3.2
403	1.1

Tank1	0.003
Tank 2	0.03
Tank 3	0.04
Tank 4	0.0001
Tank 11	0.3
Tank 12	0.3
OWS	0.01
Piping	0.3
Total	20.68

Pollutant	Permit Potential					Title V Potential				
	Loading Rack		Fugitives	Tanks	Total	Loading Rack		Fugitives	Tanks	Total
	300,000,000 gal limit gasoline (35 mg/L)	180,000,000 gal limit diesel	8 mg/L			630,720,000 gal limit gasoline (35 mg/L)	180,000,000 gal limit diesel	8 mg/L		
	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy	tpy
NOx	5.01	0.003			5.01	10.53	0.003			10.53
VOC	43.8	0.06	10.01	20.68	74.55	92.2	0.06	21.05	20.68	133.99
CO	12.53	0.012			12.54	26.33	0.012			26.33

The NOx and CO emissions were provided in the application based on using AP-42 emission factors for a flare. Most of the terminals use the following emission factors based on the VCU manufacturer’s guaranteed rate of 4 mg/l of NOx and 10 mg/l of CO. The NOx and CO emission factors are 0.0334 and 0.084 lbs/Mgal gasoline, respectively. In the correspondence file ~1995 I found the use of these emission factors for this facility. Therefore, for consistency with other terminals and much earlier emissions calculations, these emission factors have been used.

NOx emissions (tpy) = (300,000) 1000 gal * 0.0334 lb/mgal loaded * ton/2000 lb = 9.94 tpy
 CO emissions (tpy) = (300,000) 1000 gal * 0.0835 lb/mgal loaded * ton/2000 lb = 24.84 tpy

Fugitives Losses:

300,000,000 gal/yr * 3.785 L/gal * 8 mg/L * 1 g/1000 mg * 1 lb/453.6 grams =
 = 20,027 pounds /year
 = 10.01 tons/year

630,720,000 gal/yr * 3.785 L/gal * 8 mg/L * 1 g/1000 mg * 1 lb/453.6 grams =
 = 42,104 pounds /year
 = 21.05 tons/year

Pollutant	Permitted Potential Emissions (tpy)	Title V Potential Emissions (tpy)
NOx	5.01	10.53
VOC	74.55	133.99
CO	12.54	26.33

This facility is correctly defined as a Synthetic Minor for fee purposes.

8. Summary of Permit Changes:

- Added gasoline to the list of fuel options to tank 201 (ID No. 201). Moved tank 201 from the insignificant list where it was listed as ID No. I-201 to the permitted equipment list now listed as ID No. 201, since it will now have the option to store gasoline. Added NESHAP label to this tank since it

is subject to NESHAP Subpart BBBBBB. Revised the description to fixed roof with an internal floating roof.

- Added tank 203 (ID No. 203) to the permitted equipment list. This tank is subject to NSPS Subpart Kb and NESHAP Subpart BBBBBB and will have both the NSPS and NESHAP label listed.
- Revised stipulation 2D .0524, Subpart XX, with the most current version.
- Revised stipulation 2Q .0315, Synthetic Minor Facilities, by increasing the allowable throughput of gasoline from 180,000,000 gallons to 300,000,000 gallons per year.
- Updated the insignificant/exempt sources with the new exemptions per regulation change effective June 13, 2016 for 2Q .0102.

9. Conclusions, Comments, and Recommendations:

I recommend issuance of Permit No. 02584R15.

Permit Coordinator: _____ **Date:**
Charles McEachern, P.E.

AQ Supervisor: _____ **Date:**
Patrick Butler, P.E.