

Commonwealth of Kentucky
Division for Air Quality
UPDATED STATEMENT OF BASIS / SUMMARY

Title V, Operating
Permit: V-24-038
TransMontaigne Operating Company, L.P. – Paducah Terminal
223 Elizabeth Street, Paducah, KY 42003
December 11, 2024
Dylan Sears, Reviewer
SOURCE ID: 21-145-00052
AGENCY INTEREST: 3071
ACTIVITY: APE20220001

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SECTION 1 – SOURCE DESCRIPTION

SIC Code and description: 4226, Bulk Petroleum Products Storage Facility

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: McCracken

Nonattainment Area ☒ N/A ☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ Ozone ☐ Lead

If yes, list Classification:

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☒ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☐ Yes ☒ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No

If yes, list which pollutant(s): Benzene, Hxane, Toluene, Xylenes

PTE* greater than 25 tpy for combined HAP ☒ Yes ☐ No

*PTE does not include self-imposed emission limitations.

Description of Facility:

TransMontaigne Operating Company, L.P. (TransMontaigne) is a bulk petroleum products storage facility and operates a bulk gasoline terminal located in Paducah, Kentucky. Petroleum products (diesel fuel, conventional gasoline, resin oil No.80, and jet A/kerosene) are stored in tanks at the facility and then transferred by tank trucks to service stations and other receiving facilities. In addition, products could be transferred in by truck and transferred out by barge. There are eighteen (18) storage tanks and two (2) loading racks as well as low VP product storage tanks listed as insignificant activities. A two-bay unit with eleven (11) loading arms is located at the Paducah facility and a unit with fourteen (14) loading arms is located at the Riverway facility. Volatile organic compounds (VOC) emissions from the Paducah and Riverway loading racks are controlled by a John Zink Vapor Combustion Unit located at the Paducah terminal.

SECTION 2 – CURRENT APPLICATION AND EMISSION SUMMARY FORM

Permit Number: V-24-038

Activities: APE20220001

Received: December 13, 2022

Application Complete Date(s): December 11, 2024

Permit Action: ☐ Initial ☒ Renewal ☐ Significant Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☐ Yes ☒ No NSR Applicable? ☐ Yes ☒ No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☐ Yes ☒ No

Description of Action:

TransMontaigne requested a renewal to their previous permit V-17-041 on December 13 of 2022. The applicant requested the following changes:

- Modification of the precision to the water pressure gauge identified in the permit for loading racks subject to NSPS XX, which the Division denied due to the fact that the instrument precision is mandated in NSPS XX.
- Change inspection requirements for loading racks subject to 40 CFR Part 64, from daily to weekly, which the Division accepted (based on the submittal of a new CAM plan) under the grounds that the original monitoring frequency was suggested by the company as part of their CAM plan.
- Removal of insignificant activities tanks 109 and 110, as they are no longer in operation.
- Update to Insignificant activities.

| V-24-038 Emission Summary | | |
|---------------------------------|-------------------|--------------------|
| Pollutant | 2023 Actual (tpy) | PTE V-24-038 (tpy) |
| CO | 1.49 | 41.75 |
| NOx | 0.59 | 16.7 |
| VOC | 16.06 | 3,526.94 |
| Hazardous Air Pollutants (HAPs) | | |
| 2,2,4-Trimethylpentane | 0 | 0.113 |
| Benzeene | 0.128 | 33.804 |
| Cumene | 0.000288 | 0.00410 |
| Ethylbenzene | 0.014 | 0.131 |
| Hexane | 0.175 | 56.533 |
| Toluene | 0.171 | 45.934 |
| Xylenes (Total) | 0.0835 | 17.690 |
| Combined HAPs: | -- | 157.921 |

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

| Emission Units #4 & 15 Loading Racks | | | | |
|--|-------------------------------|---|---|-------------------|
| Pollutant | Emission Limit or Standard | Regulatory Basis for Emission Limit or Standard | Emission Factor Used and Basis | Compliance Method |
| TOC | 35 mg /L (gasoline loaded) | 40 CFR 60.502(b) | 6.79813 lb/1000gal AP-42 Chapter 5.2 | Testing, CAM |
| Initial Construction and Modification Dates: <i>see below</i> | | | | |
| Process Description: Paducah Terminal: 15 (LR-1) Two-Bay Tank Truck Loading Rack with eleven (11) loading arms and associated pipeline equipment. Installation Date: 1988; Reconstructed 2001. <u>Material</u> Diesel Fuel (distillate), Conventional Gasoline, Resin Oil No. 80 (distillate), and Jet A/Kerosene (distillate) Riverway Terminal: 04 (LR-1) Two-Bay Tank Truck Loading Rack with fourteen (14) loading arms and associated pipeline equipment Installation Date: 6/19/1979; Reconstruction 2001. <u>Material</u> Diesel Fuel (distillate) and Conventional Gasoline/Ethanol Maximum Loaded Capacities: 500,000,000 gal/yr (Gasoline) and 500,000,000 gal/yr (Distillate) Control: Loading Rack emissions from the two loading racks are controlled by one control unit, a John Zink Vapor Combustion Unit (VCU). Date Installed: 1988 <u>Terminal Fugitive Equipment Leaks:</u> Emission Point 07 Description: Fugitive equipment leaks from pump seals, valves, connectors, etc. Construction Date: 1995 Controls: None Applicable Regulation: 401 KAR 60:005, Section 2(2)(eee), 40 C.F.R. 60.500 through 60.506 (Subpart XX), Standards of Performance for Bulk Gasoline Terminals. 401 KAR 63:002, Section 2(4)(ccccc), 40 C.F.R. 63.11080 through 63.11100, Tables 1 through 3 (Subpart BBBB), National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. | | | | |

Emission Units #4 & 15 Loading Racks

40 CFR 64, Compliance Assurance Monitoring (CAM), for volatile organic compounds (VOC).

STATE-ORIGIN REQUIREMENTS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances, applies to the loading racks while loading distillate.

Non-Applicable Regulation:

401 KAR 63:002, Section 2(4)(k), 40 C.F.R. 63.420 through 63.429, Table 1 (Subpart R), National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). Per Section 63.420(a)(2) of the rule, the regulation applies only to facilities that are part of a major source of HAP emissions. The terminal is a minor HAP source, since maximum HAP emissions are significantly less than 22.5 ton/yr total HAP and 9 ton/yr individual HAP. Therefore, the rule is non-applicable.

Comments:

401 KAR 63:002, Section 2(4)(ddddd), 40 C.F.R. 63.11110 through 63.11132, Tables 1 through 3 (Subpart CCCCCC), National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, is applicable to each gasoline dispensing facility (GDF) that is located at an area source. According to the definition in 40 CFR 63.11132, GDF means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment. TransMontaigne is a bulk gasoline terminal that does not have GDF on-site; therefore, the requirements of this subpart do not apply.

401 KAR 63:010, Fugitive Emissions. The requirements of this rule apply to an apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality. There are fugitive emissions coming from valves, pumps, connectors and open-ended lines, which are subject to 40 CFR 63 Subpart BBBB. So, this regulation does not apply to the fugitive components.

401 KAR 61:055, Existing loading facilities at bulk gasoline terminals. This rule applies to existing bulk gasoline loading facilities located in either an urban ozone non-attainment area, or located in any county which is designated nonattainment or unclassified under 401 KAR 51:010 and is a part of a major source of VOC emissions. The terminal is a major source of VOC emissions; however, Paducah is attainment for ozone. Therefore, the rule does not apply.

401 KAR 61:050, Existing storage vessels for petroleum liquids. Under Section 2(1), a tank is only subject to the rule if it is located in an ozone non-attainment area for any non-attainment classification except marginal. Paducah is classified as an ozone attainment area. Therefore, the rule does not apply.

Petroleum Products Storage Facilities:

Initial Construction Date: *Various, See Below*

Process Description:

Paducah Facility:

| | | |
|-----------|---|----------------|
| 16(T-101) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 1,292,649 gallons capacity (4,899 m ³) | Installed 1958 |
| 17(T-102) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 659,400 gallons capacity (2496 m ³) | Installed 1958 |
| 18(T-103) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 1,352,400 gallons capacity (5120 m ³) | Installed 1958 |
| 19(T-104) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 1,222,200 gallons capacity (4627 m ³) | Installed 1958 |

Riverway Facility:

| | | |
|---------|---|----------------|
| 03(T-2) | Internal Floating Roof Gasoline or lower vapor pressure vapor product storage tank 588,000 gallons capacity (2226 m ³) | Installed 1939 |
| 10(T-3) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 588,000 gallons capacity (2226 m ³) | Installed 1939 |
| 11(T-4) | Internal Floating Roof Gasoline / Ethanol or lower vapor pressure product storage tank 252,000 gallons capacity (99.94 m ³) | Installed 1939 |
| 12(T-5) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 210,000 gallons capacity (799.9 m ³) | Installed 1939 |
| 09(T-6) | External (with dome) Floating or lower vapor pressure product storage tank 1,260,000 gallons capacity (4770 m ³) | Installed 1954 |
| 14(T-7) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 210,000 gallon capacity (799.9 m ³) | Installed 1939 |
| 08(T-8) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 210,000 gallon capacity (799.9 m ³) | Installed 1939 |
| 13(T-9) | Internal Floating Roof Gasoline or lower vapor pressure product storage tank 210,000 gallon capacity (799.9 m ³) | Installed 1939 |

Applicable Regulation:

401 KAR 50:012, General Application.

Petroleum Products Storage Facilities:

401 KAR 63:002, Section 2(4)(ccccc), 40 C.F.R. 63.11080 to 63.11100, Tables 1 through 3 (Subpart BBBB), National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities.

Non-Applicable Regulation:

401 KAR 59:050, New storage vessels for petroleum liquids. Under Section 1(1) of the rule, a tank could be subject to the rule if it is located in either an urban ozone non-attainment area, or located at a major source of VOC emissions. Paducah is attainment for ozone, but the terminal is a major source of VOC emissions. This rule does not apply to any storage vessel with a storage capacity larger than 40,000 gallons at this plant since they each commenced before the classification date of April 9, 1972. However, this rule does apply to vessels with a storage capacity less than or equal to 40,000 gallons at this plant that commenced on or after July 24, 1984, since this plant is a major source of VOC emissions. The terminal has tanks classified as insignificant activities that do not store petroleum liquids; therefore, this regulation is non-applicable

Comments:

Permit shield request with justification provided in the initial Title V application dated February 1999.

401 KAR 59:101, New bulk gasoline plants, and 401 KAR 61:056, Existing bulk gasoline plants. These rules do not apply because the terminal is not located in a county or portion of a county which is designated ozone nonattainment, for any nonattainment classification except marginal.

Emission Unit 05 (RBRG-1) Barge Loading

Initial Construction Date: *See Below*

Process Description:

05 (RBRG-1) Barge Loading

Construction Date: Approximately 1938

Control Device: None

Material

Distillate (Diesel, Resin
Oil No. 80, and Jet A/Kerosene)

Maximum throughput (gal/yr)

100,000,000

Applicable Regulation:

401 KAR 63:002, Section 2(4)(q), 40 C.F.R. 63.560 through 63.568 (Subpart Y), National Emission Standards for Marine Tank Vessel Loading Operations.

Comments:

Permit shield request with justification for some regulations was provided in the initial Title V application dated February 1999.

Emission Unit 05 (RBRG-1) Barge Loading

401 KAR 59:101, New bulk gasoline plants, and 401 KAR 61:056, Existing bulk gasoline plants. This rule does not apply because the terminal is not located in a county or portion of a county which is designated ozone nonattainment, for any nonattainment classification except marginal.

INSIGNIFICANT ACTIVITIES

| Process Description | Generally Applicable Regulations |
|---|--|
| (--) Surface Painting of Tanks (1,000 gal/yr maximum) | 401 KAR 61:020 |
| (PBRG-1) Barge Loading, low vapor pressure petroleum products loaded only for Paducah facility | None |
| (ECV-1) Emergency Containment Vessel for (LR-1) | None |
| Low VP (less than 1.5 PSIA) petroleum products: (T-105) 725,600 gallons capacity (2747 m ³) (T-106) 357,000 gallons capacity (1351 m ³) | 401 KAR 61:050 (exempt by Section 3(3)) |
| Low VP petroleum products: (T-1) 1,218,000 gallons capacity (4611 m ³) (T-10) 630,000 gallons capacity (2385 m ³) (T-11) 630,000 gallons capacity (2385 m ³) (T-12) 1,260,000 gallons capacity (4770m ³) | 401 KAR 61:050 (exempt by Section 3(3)) 401 KAR 63:020 |
| Additive Tanks: (42) 3,990 gallons capacity (44) 12,012 gallons capacity (43) 1,008 gallons capacity (45) 6,006 gallons capacity (46) 2,016 gallons capacity | None |
| Petroleum Contact Water (PCW) Storage (T-111) 10,000 gallons capacity | None |
| Petroleum PCW Storage (T-13) 8,272 gallon capacity | None |

Comments:

Tanks subject to 401 KAR 61:050 are considered insignificant activities as long as they are equipped with a submerged fill pipeline.

Tanks T-111 and T-13 were subject to 401 KAR 59:095 in the previous permit, however the facility has revisited the applicability in the V-24-038 renewal process and identified that the tanks do not meet the definition of new oil-effluent water separators. They do contain water that has been in contact with petroleum, but the separation process occurs offsite.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

| Emission Unit(s) | Control Device | Parameter | Regulatory Basis | Frequency | Test Method | Permit Limit | Test Result | Thruput and Operating Parameter(s) Established During Test | Activity Graybar | Date of last Compliance Testing |
|------------------|-----------------------|-----------|----------------------------|-----------|-------------|--------------|-------------|--|------------------|---------------------------------|
| EP 15 EP 04 | Vapor Combustion Unit | VOC | 401 KAR 52:020, Section 10 | 5 years | Method 25B | 35 mg/l | 2.46 mg/l | 85,016 gal/hr | CMN2012 0002 | 10/2/2012 |
| | | | | | Method 25A | | 1.67 mg/l | 85,000 gal/hr | CMN2017 0001 | 9/26/2017 |
| | | | | | | | 10.48 mg/l | 308,080 gal/hr | CMN2022 0001 | 9/13/2022 |

Footnotes:

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

| Emission and Operating Limit | Regulation | Emission Unit |
|-------------------------------------|---|---------------|
| 9.0 tpy of individual HAP emissions | To preclude major source status for HAP | Source-wide |
| 22.5 tpy of combined HAP emissions | | |

Table B - Summary of Applicable Regulations:

| Applicable Regulations | Emission Unit |
|--|-----------------------------------|
| 401 KAR 50:012, General Application. | Storage Facilities |
| 401 KAR 60:005, Section 2(2)(eee), 40 C.F.R. 60.500 through 60.506 (Subpart 38), Standards of Performance for Bulk Gasoline Terminals. | 004, 007 015 |
| 401 KAR 63:002, Section 2(4)(q), 40 C.F.R. 63.560 through 63.568 (Subpart Y), National Emission Standards for Marine Tank Vessel Loading Operations. | 005 |
| 401 KAR 63:002, Section 2(4)(ccccc), 40 C.F.R. 63.11080 through 63.11100, Tables 1 through 3 (Subpart BBBB), National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities. | Storage Facilities, 007, 004, 015 |
| 401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances | 004, 015 |

Table C - Summary of Precluded Regulations:

N/A

Table D - Summary of Non Applicable Regulations:

| Non Applicable Regulations | Emission Unit |
|---|--------------------|
| 401 KAR 59:050, New storage vessels for petroleum liquids. | Storage Facilities |
| 401 KAR 63:002, Section 2(4)(k), 40 C.F.R. 63.420 through 63.429, Table 1 (Subpart R), National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). | 007, 004, 015 |

Air Toxic Analysis

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances

The Division for Air Quality (Division) has performed modeling using SCREEN View on December 11, 2024 of potentially hazardous matter or toxic substances (Benzene, Cumene, Ethyl Benzene, Hexane; N-Hexane, Toluene, Xylenes (Total)) that may be emitted by the facility based upon the process rates, material formulations, stack heights and other pertinent information provided by the applicant. Based upon this information, the Division has determined that the conditions outlined in this permit will assure compliance with the requirements of 401 KAR 63:020.

Single Source Determination

N/A

SECTION 5 – PERMITTING HISTORY

| Permit | Permit Type | Activity# | Complete Date | Issuance Date | Summary of Action | PSD/Syn Minor |
|-------------|------------------|--------------------------|---------------|---------------|------------------------|---------------|
| V-99-021 | Initial Issuance | G019 | 5/19/1999 | 3/9/2000 | | N/A |
| V-99-021 R1 | Sign. revision | 53721 | 4/11/2001 | 8/28/2001 | use of VCU as control | N/A |
| V-06-016 | Renewal | APE2004002 | 10/22/2004 | 9/14/2006 | Renewal | N/A |
| | Sign. Revision | APE20040003 | 3/30/2006 | | Significant Revision | |
| V-06-016 R1 | Revision | APE20080001 | 8/29/2008 | 11/25/2008 | Minor Revision | N/A |
| V-12-022 | Title V Renewal | APE20110001, APE20110002 | 5/11/2011 | 9/17/2012 | Renewal, updates to IA | N/A |
| V-17-041 | Renewal | APE20170001 | 5/11/2017 | 6/10/2018 | Renewal | N/A |

SECTION 6 – PERMIT APPLICATION HISTORY

N/A

APPENDIX A – ABBREVIATIONS AND ACRONYMS

| | |
|-------------------|---|
| AAQS | – Ambient Air Quality Standards |
| BACT | – Best Available Control Technology |
| Btu | – British thermal unit |
| CAM | – Compliance Assurance Monitoring |
| CO | – Carbon Monoxide |
| Division | – Kentucky Division for Air Quality |
| ESP | – Electrostatic Precipitator |
| GHG | – Greenhouse Gas |
| HAP | – Hazardous Air Pollutant |
| HF | – Hydrogen Fluoride (Gaseous) |
| MSDS | – Material Safety Data Sheets |
| mmHg | – Millimeter of mercury column height |
| NAAQS | – National Ambient Air Quality Standards |
| NESHAP | – National Emissions Standards for Hazardous Air Pollutants |
| NO _x | – Nitrogen Oxides |
| NSR | – New Source Review |
| PM | – Particulate Matter |
| PM ₁₀ | – Particulate Matter equal to or smaller than 10 micrometers |
| PM _{2.5} | – Particulate Matter equal to or smaller than 2.5 micrometers |
| PSD | – Prevention of Significant Deterioration |
| PTE | – Potential to Emit |
| SO ₂ | – Sulfur Dioxide |
| TF | – Total Fluoride (Particulate & Gaseous) |
| VOC | – Volatile Organic Compounds |