

Louisville Metro Air Pollution Control District
850 Barret Ave., Louisville, Kentucky 40204
April 15, 2009

Title V Statement of Basis

Company: Marathon Petroleum Company, LLC

Plant Location: 4510 Algonquin, Louisville, Kentucky 40211

Date Application Received: 10-06-2006

Date Admin Complete: 12-06-2006

Date of Draft Permit: 12-01-2008

Date of Proposed Permit: 02-06-2009

District Engineer: Chris Bryant

Permit No: 87-97-TV (R1)

Plant ID: 741

SIC Code: 5171

NAICS: 42271

AFS: 00741

Introduction:

This permit will be issued pursuant to: (1) Regulation 2.16, (2) Title 40 of the Code of Federal Regulations Part 70, and (3) Title V of the Clean Air Act Amendments of 1990. Its purpose is to identify and consolidate existing District and Federal air requirements and to provide methods of determining continued compliance with these requirements.

Jefferson County is classified as an attainment area for lead (Pb), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), 1 hr and 8 hr ozone (O₃), and particulate matter less than 10 microns (PM₁₀); and is a non-attainment area for particulate matter less than 2.5 microns (PM_{2.5}).

Application Type/Permit Activity:

Initial Issuance

Permit Revision

Administrative

Minor

Significant

Permit Renewal

Compliance Summary:

Compliance certification signed

Compliance schedule included

Source is out of compliance

Source is operating in compliance

I. Source Information

1. **Product Description:** Bulk Gasoline Distribution Terminal
2. **Process Description:** Marathon Petroleum Company, LLC receives petroleum product by pipeline and barge, stores the product in tanks, and then loads the products to tanker trucks, barges, or to one of two different pipelines for distribution. Ethanol, additives, and diesel dye are received by truck and are injected into the product at the loading rack.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Fourteen (14) internal roof storage tanks (gasoline)
U2	Eight (8) horizontal fixed-roof storage tanks
U3	One (1) six bay truck loading rack
U3	One (1) John Zink dual bed carbon adsorption unit to control emissions from the truck loading rack
U3	One (1) Rane vapor combustion unit (enclosed flare) and one (1) John Zink vapor combustion unit (flare) to control emissions from the loading rack when the carbon adsorption unit is offline
U4	One (1) barge loading operation
U4	One (1) John Zink vapor combustion unit (open flare) to control emissions from the barge loading operation
U5	One (1) railcar unloading operation for ethanol only

5. **Fugitive Sources:** There are fugitive VOC, HAP, and TAC emissions from equipment used to store and transfer petroleum products.
6. **Permit Revisions:**

Revision No.	Issue Date	Public Notice Date	Type	Attachment No./Page No.	Description
N/A	10/6/2000	4/23/2000	Initial	Entire Permit	Initial Permit Issuance
R1	3/27/2009	12/1/2008	Renewal	Entire Permit	5 year renewal; Incorporate STAR category 1 TAC requirements.

7. Emission Summary:

Pollutant	Actual Emissions (tpy) 2006 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	0	No
NO _x	0	No
SO ₂	0	No
PM	0	No
VOC	52.4	Yes
Single HAP > 1 tpy	All individual HAPs < 1 tpy	Yes
Total HAPs	2.32	Yes

8. Applicable Requirements:

PSD NSPS SIP MACT
 NSR NESHAPS District-Origin Other

9. Future MACT Requirements: The source will be required to comply with applicable requirements of 40 CFR Part 63, Subpart BBBBBB - *National Emission Standards for Hazardous Air Pollutants for Source Category: Bulk Gasoline Terminals (Area Sources)* on or before the compliance date for existing sources as specified in the MACT rule.

10. Referenced Federal Regulations in Permit:

40 CFR Part 60 Subpart A	General Provisions
40 CFR Part 60 Subpart XX	Standards of Performance for Bulk Gasoline Terminals
40 CFR Part 60 Subpart Ka	Standards of Performance for Storage Vessels for Petroleum Liquids (After May 18, 1987 and Prior to July 23, 1984)
40 CFR Part 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels for Petroleum Liquids (After July 23, 1984)
40 CFR Part 63 Subpart Y	National Emission Standards for Marine Vessel Tank Loading Operations
40 CFR Part 63 Subpart R	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)

II. Regulatory Analysis

- 1. Acid Rain Requirements:** The source is not subject to the Acid Rain Program.
- 2. Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. This source does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
- 3. Prevention of Accidental Releases 112(r):** The source does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
- 4. 40 CFR Part 63 Subpart R Applicability Determination:** 40 CFR Part 63, Subpart R, section 63.420 states that the affected source to which the provisions of this rule applies is each bulk gasoline terminal, except those terminals for which the owner or operator has documented and recorded that the E_T in the following equation is less than 1 and complies with 63.420(c), (d), (e), and (f). The source is subject to 40 CFR Part 63, Subpart R, section 63.428(i)(3) which requires annual reports to document that the E_T value is less than 1.

$$E_T = CF [0.59(T_F)(1 - CE) + 0.17(T_E) + 0.08(T_{ES}) + 0.038(T_I) + 8.5 \times 10^{-6}(C) + KQ] + 0.04(OE)$$

where:

E_T = emissions screening factor for bulk gasoline terminals

$CF = 0.161$ for terminals that do not handle any reformulated or oxygenated gasoline containing 7.6 percent by volume or greater MTBE or

$CF = 1.0$ for terminals that do handle reformulated or oxygenated gasoline containing 7.6 percent by volume or greater MTBE

T_F = total number of fixed-roof gasoline storage tanks without an internal floating roof

CE = control efficiency limitation on potential to emit for the vapor processing system used to control emissions from fixed-roof gasoline storage vessels [value should be added in decimal from (percent divided by 100)];

TF = total number of fixed-roof gasoline storage vessels without an internal floating roof;

T_E = total number of external floating roof gasoline storage vessels with only primary seals;

T_{ES} = total number of external floating roof gasoline storage vessels with primary and secondary seals;

T_I = total number of fixed-roof gasoline storage vessels with an internal floating roof;

C = number of valves, pumps, connectors, loading arm valves, and open-ended lines in gasoline service;

Q = gasoline throughput limitation on potential to emit or gasoline throughput limit in compliance with paragraphs (c), (d), and (f) of this section (liters/day);

$K = 4.52 \times 10^{-6}$ for bulk gasoline terminals with uncontrolled loading racks (no vapor collection and processing systems), OR

$K = (4.5 \times 10^{-9})(EF + L)$ for bulk gasoline terminals with controlled loading racks (loading racks that have vapor collection and processing systems in stalled on the emission stream);

EF = emission rate limitation on potential to emit for the gasoline cargo tank loading rack vapor processor outlet emissions (mg of total organic compounds per liter of gasoline loaded);

OE = other HAP emissions screening factor for bulk gasoline terminals or pipeline breakout stations (tons per year). OE equals the total HAP from other emission sources not specified in parameters in the equations for ET or EP . If the value of 0.04 (OE) is greater than 5 percent of either ET or EP , then paragraphs (a)(1) and (b)(1) of 63.420 shall not be used to determine applicability;

$L = 13$ mg/l for gasoline cargo tanks meeting the requirement to satisfy the test criteria for a vapor-tight gasoline tank truck in §60.501, or

$L = 304$ mg/l for gasoline cargo tanks not meeting the requirement to satisfy the test criteria for a vapor-tight gasoline tank truck in §60.501.

Marathon Petroleum Company, LLC submitted the following information on January 24, 2008 for CY 2007 for the Algonquin terminal.

$$\begin{array}{llll}
 CF = 0.161 & T_E = 0 & C = 16,293 & EF = 80 \text{ mg/l} \\
 CE = 0 & T_{ES} = 0 & Q = 6,813,000 & OE = 2.56 \\
 T_F = 0 & T_I = 14 & K = 4.5 \times 10^{-9}(EF + L) & L = 13 \text{ mg/l}
 \end{array}$$

$$(0.161)((0.59 * 0 * 1) + (0.17 * 0) + (0.08 * 0) + (0.38 * 14) + (8.5 \times 10^{-6}) * 16,293) + ((4.5 \times 10^{-9} * (80 + 13)) * 6,831,000) + (0.04 * 2.56) = \mathbf{0.669}$$

The source is required to submit annual reports to the District which include the above E_T calculation to demonstrate the E_T value is less than 1 and complies with 63.420(c), (d), (e), and (f).

- 5. 40 CFR Part 64 Applicability Determination:** Marathon Petroleum Company, LLC is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources* since the company has accepted synthetic minor source limits for all regulated air pollutants for which the company is a major source. If at some point in the future, the company requests to remove the annual *plant-wide* VOC emission limit of less than 100 tons, a Part 64 CAM Plan will be required.
- 6. Basis of Regulation Applicability**

a. Plant-wide

Marathon Petroleum Company, LLC is a major source for VOC, single HAP, and total HAPs. Regulation 2.16 - *Title V Operating Permits* establishes requirements for major sources.

The source is subject to a *plant-wide* VOC limit of less than 100 tons during any consecutive 12-month period and 10 tons during any calendar month.

The source is required to limit the *plant-wide* emissions of any individual HAP to less than 10 tons during any consecutive 12-month period and 1.0 ton during any calendar month. For all HAPs combined, the source is required to limit the *plant-wide* emissions of all HAPs to less than 25 tons during any consecutive 12-month period and 2.50 tons during any calendar month.

For the truck loading rack, the source is required to comply with the following product throughput limits:

Limit (gal/12-month period)	Product
300,000,000	Gasoline
300,000,000	Fuel Oil

For the barge loading operation, the source is required to comply with the following product throughput limits:

Limit (gal/12-month period)	Product
500,000,000	Gasoline
650,000,000	Gasoline and Fuel Oil Combined
30,000,000	Gas/Oil (MPC Catalytic Cycle Oil)
131,400,000 (plant-wide)	Ethanol

Regulations 5.01, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Marathon Petroleum Company, LLC emits the following TACS: benzene, hexane, 2,2,4-trimethylpentane, naphthalene, xylene, toluene, ethylbenzene, and 1,2,4-trimethylbenzene. Marathon Petroleum Company, LLC submitted their Category 1 and Category 2 TAC Environmental Acceptability Demonstration to the District on December 19, 2006. The potential emissions of all Category 1 and Category 2 TACs were below the de minimis threshold values, except for benzene. The potential emissions of benzene could exceed the de minimis threshold values; therefore Tier 4 air dispersion modeling was performed.

Based on Tier 4 ISCST3 refined air modeling, the carcinogenic risk for each Category 1 TAC is below 1.0 for non-industrial property and below 10.0 for industrial property with the annual product throughput limits specified in this permit and utilizing control devices. All Category 1 TACs were determined to be de minimis except for benzene. All non-deminimis sources of TACs including storage tanks, barge loading, truck loading rack, fugitive components, and fugitive emissions from the tanker trucks were included in the STAR Category 1 TAC EA Demonstration. The carcinogenic risk for all Category 1 TACs for all processes is below 7.5 for non-industrial property and below 75.0 for industrial property. The following Table represents the Carcinogenic Risk or EAG_c for benzene based on the maximum off-site concentration predicted from the Tier 4 ISCST3 air dispersion modeling runs.

Since the maximum off-site Carcinogenic Risk meets the more stringent non-industrial R_C of < 1.0 for individual process/process equipment and the plant-wide cumulative risk is < 7.5 , the source has demonstrated compliance with the EA Goals for benzene. The BAC_C for benzene is 0.13 ug/m^3 .

Emission Source	Max Concentration (ug/m^3)	Risk resulting from maximum off-site concentration
Tank 14	0.009	0.07
Tank 26	0.0094	0.07
Tank 48	0.0057	0.04
Tank 60	0.0153	0.12
Tank 106	0.0182	0.14
Tank 113	0.0077	0.06
Tank 119	0.0078	0.06
Tank 130	0.0112	0.09
Tank 133	0.0179	0.14
Tank 156	0.0095	0.07
Tank 157	0.0069	0.05
Tank 162	0.0145	0.11
Tank 165	0.0124	0.10
Tank 174	0.0032	0.02
VRU (Truck Loading Rack)	0.0766	0.59
VCU (Barge)	0.0011	0.01
Components	0.0465	0.36
Truck Fugitive	0.0778	0.60
Portable Flare	0.067	0.52
	Facility-wide R_C -VRU	2.73
	Facility-wide Risk - Flare	2.63

Regulations 5.11 and 5.12 establish emission standards for toxic air pollutants. Marathon Petroleum Company, LLC emits the following TAPs: benzene, cumene, ethylbenzene, methyl isobutyl ketone, naphthalene, xylene, toluene, and 1,2,4-trimethylbenzene. The potential controlled hourly TAP emissions are below the ASL values.

b. Emission Unit U1 - Internal Floating Roof Storage Tanks

i. Equipment:

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
T-60 (IFR Tank)	1,680,000 gallons	1980	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR Part 60 Subpart Ka	Subpart Ka applies to storage tanks constructed after May 18, 1978 and prior to July 23, 1984 that store petroleum liquids.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.
T-61 (IFR Tank)	840,000 gallons	1985	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			40 CFR Part 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.
T-165 (IFR Tank)	2,814,000 gallons	1990	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-119 (IFR Tank)	2,268,000 gallons	2006	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-156 (IFR Tank)	2,261,520 gallons	2006	7.12, 6.43,	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group II company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-157 (IFR Tank)	2,261,520 gallons	2006	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to comply with the seal requirements in Subpart Kb and be equipped with internal floating roofs.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-26 (IFR Tank)	1,561,686 gallons	2002	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-14 (IFR Tank)	963,000 gallons	2000	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR Part 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-48 (IFR Tank)	947,016 gallons	1999	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			40 CFR Part 60 Subpart Kb	Subpart Kb applies to VOC tanks constructed after July 23, 1984.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-113 (IFR Tank)	2,349,900 gallons	1947	6.13	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 6.13 for VOC which were installed prior to April 19, 1972.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.
T-130 (IFR Tank)	2,142,000 gallons	1972	6.13	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 6.13 for VOC which were installed prior to April 19, 1972.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.
T-133 (IFR Tank)	2,268,020 gallons	1964	6.13	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 6.13 for VOC which were installed prior to April 19, 1972.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.
T-162 (IFR Tank)	4,032,000 gallons	1967	6.13	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 6.13 for VOC which were installed prior to April 19, 1972.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
T-106 (IFR Tank)	3,214,134 gallons	1972	6.13	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 6.13 for VOC which were installed prior to April 19, 1972.
			6.43	Regulation 6.43 requires all tanks storing gasoline with a capacity greater than 39,000 gallons to be equipped with internal floating roofs. All gasoline tanks shall meet the floating roof seal requirements in Subpart Kb.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.11	Regulation 5.11 establishes emission standards for toxic air pollutants for equipment constructed prior to November 11, 1986.

ii. **Standards/Operating Limits**

VOC

- a) Regulation 6.43, section 8.1 requires all gasoline storage tanks greater than 39,000 gallons to be equipped with internal floating roofs.
- b) Regulation 6.43, section 8.2 requires all gasoline storage tanks to comply with the floating roof seal requirements of 40 CFR Part 60, subpart Kb.
- c) All gasoline storage tanks installed after July 23, 1984 with a capacity greater than 19,812 gallons and a vapor pressure equal to or greater than 27.6 kPa are subject to the VOC emission standards, monitoring, record keeping, and reporting requirements of 40 CFR Part 60, Subpart Kb.
- d) Regulation 6.13, section 3.1 requires all storage tanks greater than 40,000 gallons to be equipped with floating roofs.

- e) Regulation 7.12, section 3.1 requires all storage tanks greater than 40,000 gallons to be equipped with floating roofs.

- iii. **Monitoring**

- VOC**

- 40 CFR Part 60, Subpart Kb sections 60.113b and 60.116b establishes monitoring requirements for internal floating roof gasoline storage tanks.

- iv. **Record Keeping**

- VOC**

- 40 CFR Part 60, Subpart Kb section 60.115b establishes record keeping requirements for each storage vessel subject to Subpart Kb. Regulation 2.16, section 4.1.9.2 establishes record keeping requirements to assure ongoing compliance with the terms and conditions of the permit. The source is required to maintain monthly records that show the throughput (in gallons) of each product for each storage tank during each calendar month and consecutive 12-month period to assure the emissions of VOC and HAPs remain below the major source threshold levels.

- v. **Reporting**

- VOC**

- 40 CFR Part 60, Subpart Kb section 60.115b establishes reporting requirements for each storage vessel subject to Subpart Kb. Regulations 6.13 and 7.12 do not establish any reporting requirements. Regulation 2.16, section 4.1.9.3 establishes reporting requirements to assure ongoing compliance with the terms and conditions of the permit.

- c. **Emission Unit U2 - Horizontal Fixed-Roof Storage Tanks**

- i. **Equipment:**

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
T-179 (HFR Tank)	350 gallons	2005	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-180 (HFR Tank)	550 gallons	2005	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-178 (HFR Tank)	8,000 gallons	2005	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-176 (HFR Tank)	10,000 gallons	2005	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.
T-177 (HFR Tank)	500 gallon	2005	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
T-183 (HFR Tank)	3,000 gallon	2003	7.12	VOC storage tanks greater than 250 gallon capacity are subject to Regulation 7.12 for VOC which were installed after April 19, 1972.

ii. **Standards/Operating Limits**

VOC

Regulation 7.12, section 3.3 requires submerged fill if the materials have an as stored vapor pressure of 1.5 psia or greater. Regulation 7.12 applies due to the size of the tanks, however, since the vapor pressure as stored is less than 1.5 psia there are no applicable emission or equipment standards.

iii. **Monitoring**

VOC

The source is required to monitor and maintain records of the material stored in each storage vessel. If the contents of the storage vessels are changed, a record shall be made of the new contents, the new vapor pressure, and the date of the change in service.

iv. **Record Keeping**

VOC

The owner or operator shall maintain records of the material stored in each storage vessel. If the contents of the storage vessels are changed, a record shall be made of the new contents, the new vapor pressure, and the date of the change in service.

v. **Reporting**

VOC

There are no Emission Unit specific compliance reporting requirements for the tanks. The source is required to monitor the throughput for purposes of demonstrating ongoing compliance with the plant-wide VOC emission limit.

d. Emission Unit U3 - Terminal Loading Rack

i. Equipment

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
E1 - Truck Loading Rack	25,000 gal/hr per load lane 5 load lanes	1999	7.20	Regulation 7.21 applies to gasoline loading facilities constructed after June 13, 1979.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.
			7.22	7.22 applies to VOC loading facilities construction after June 13, 1979.
			40 CFR Part 60, Subpart XX	Regulation 40 CFR Part 60, Subpart XX applies to bulk gasoline distribution terminals constructed after December 7, 1980.

ii. Standards/Operating Limits

a) VOC

The terminal loading rack is subject to 40 CFR Part 60, Subpart XX - *Standards of Performance for Bulk Gasoline Terminals*. 40 CFR 60, Subpart XX section 60.502(a) requires a vapor collection system designed to collect the total organic compounds vapors displaced from tank trucks during product loading. Regulation 7.22 applies to each loading facility which loads more than 200 gallons in any one day of volatile organic materials into tank trucks, trailers, or railroad tank cars and a control efficiency of 90%. Regulation 7.20, section 3 establishes VOC standards for loading racks.

b) **HAP**

The source will be required to comply with applicable emission standards of 40 CFR Part 63, Subpart BBBBBB - *National Emission Standards for Hazardous Air Pollutants for Source Category: Bulk Gasoline Terminals (Area Sources)* on or before the compliance dates for existing sources as specified in the MACT rule.

iii. **Monitoring**

a) **VOC**

40 CFR Part 60, Subpart XX - *Standards of Performance for Bulk Gasoline Terminals* Section 60.502 establishes monitoring requirements when loading gasoline. Regulation 2.16, section 4.1.9.1 establishes monitoring requirements to assure ongoing compliance with the terms and conditions of the permit.

b) **HAP**

The source will be required to comply with applicable monitoring requirements of 40 CFR Part 63, Subpart BBBBBB - *National Emission Standards for Hazardous Air Pollutants for Source Category: Bulk Gasoline Terminals (Area Sources)* on or before the compliance dates for existing sources as specified in the MACT rule. Regulation 2.16, section 4.1.9.1 establishes monitoring requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. **Record Keeping**

a) **VOC**

40 CFR Part 60, Subpart XX - Standards of Performance for Bulk Gasoline Terminals sections 60.505 (c), (d), and (e) establishes record keeping requirements for the truck loading rack. Regulation 2.16, section 4.1.9.2 establishes record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

b) **HAP**

The source shall will be required to comply with the applicable record keeping requirements of 40 CFR Part 63, Subpart BBBBBB - *National Emission Standards for Hazardous Air Pollutants for Source Category: Bulk Gasoline Terminals (Area Sources)* on or before the compliance dates for existing sources as specified in the MACT rule. The source is required to submit annual reports to the District in accordance with 40 CFR Part 63, Subpart 63.428(i)(3).

v. **Reporting**

a) **VOC**

40 CFR Part 60, Subpart XX - Standards of Performance for Bulk Gasoline Terminals sections 60.505 establishes the reporting requirements for the truck loading rack. Regulation 2.16, section 4.1.9.3 establishes reporting requirements to assure ongoing compliance with the terms and conditions of the permit.

b) **HAP**

The source shall will be required to comply with the applicable reporting requirements of 40 CFR Part 63, Subpart BBBBBB - *National Emission Standards for Hazardous Air Pollutants for Source Category: Bulk Gasoline Terminals*

(Area Sources) on or before the compliance date for existing sources as specified in the MACT rule.

vi. **Testing**

VOC

Regulation 2.16, section 4.1.9.1.2 establishes requirements to conduct compliance testing to demonstrate ongoing compliance with VOC emission standards and limits specified in the permit for the truck loading rack. The source is required to conduct a compliance test within 5 years after the effective date of the permit. The company conducted stack testing of the terminal loading rack on June 11, 1999 which resulted in an emission rate of 1.10 mg VOC per liter of gasoline loaded.

e. **Emission Unit U4 - Barge Loading Operation**

i. **Equipment:**

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
E2 - Barge Loading Operation	298,200 gal/hr	2000	40 CFR Part 63, Subpart Y	40 CFR Part 63, Subpart Y applies to marine tank vessel loading operations constructed after September 20, 1999.
			5.01	Regulation 5.01 establishes the requirements for Environmental Acceptability for TACs. Group I company with a Category 1TAC (benzene) which could exceed the de minimis values.
			5.12	Regulation 5.12 establishes emission standards for toxic air pollutants for equipment constructed after November 11, 1986.

ii. **Standards/Operating Limits**

HAP

40 CFR Part 63, Subpart Y- *Standards of Performance for Marine Vessel Tank Loading Operations*, section 63.562 establishes HAP emission standards for the barge loading operation.

iii. **Monitoring**

HAP

40 CFR Part 63, Subpart Y- *Standards of Performance for Marine Vessel Tank Loading Operations*, section 63.564 establishes compliance monitoring requirements for the barge loading operation. Regulation 2.16, section 4.1.9.1 establishes monitoring requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. **Record Keeping**

HAP

40 CFR Part 63, Subpart Y- *Standards of Performance for Marine Vessel Tank Loading Operations*, section 63.567 establishes record keeping requirements for the barge loading operation. Regulation 2.16, section 4.1.9.2 establishes record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

v. **Reporting**

HAP

The source is required to comply with the reporting requirements in §63.9 and 63.10 of 40 CFR Part 63, Subpart A in accordance with the provisions for applicability of Subpart A of Subpart Y in Table 1 of §63.560 and fulfill all reporting requirements in 63.657. Regulation 2.16, section 4.1.9.3 establishes reporting requirements to assure ongoing compliance with the terms and conditions of the permit.

vi. **Testing**

Regulation 2.16, section 4.1.9.1.2 establishes requirements to conduct compliance testing to demonstrate ongoing compliance with VOC emission standards and limits specified in the permit for the barge loading operation. The source is required to conduct a compliance test within 5 years after the effective date of the permit. A stack test was performed June 11, 2004 for the barge loading operation which demonstrated compliance with 40 CFR Part 63, Subpart Y. The stack test indicated a 10.87 mg VOC/liter emission rate (30.3 ppm avg outlet concentration). The average stack temperature was 1,716°F. The control efficiency of the enclosed flare was 99.43% based on an average of three runs.

f. Emission Unit U5 - Railcar Unloading Operation

i. Equipment:

P/PE	Capacity	Installation Date	Applicable Regulation	Basis for Applicability
E2 - Railcar unloading operation for ethanol	60,000 gal/hr	2007	7.25	Regulation 7.25 applies to affected facilities constructed after June 13, 1979 for VOC.

ii. Standards/Operating Limits

VOC

Regulation 7.25 establishes Best Available Control Technology requirements for affected facilities with potential VOC emissions greater than 5 tons per year of VOC.

iii. Monitoring

VOC

The source is required to monitor and maintain records of the throughput (in gallons) of ethanol during each calendar month and consecutive 12-month period. Regulation 2.16, section 4.1.9.1 establishes monitoring requirements to assure ongoing compliance with the terms and conditions of the permit.

iv. Record Keeping

VOC

The source is required to maintain monthly records of the throughput (in gallons) of ethanol during each calendar month and consecutive 12-month period. Regulation 2.16, section 4.1.9.2 establishes record keeping requirements to assure ongoing compliance with the terms and conditions of the permit.

v. **Reporting****VOC**

The source is required to report all periods of exceeding the allowable annual throughput of ethanol. Regulation 2.16, section 4.1.9.3 establishes reporting requirements to assure ongoing compliance with the terms and conditions of the permit. The source is required to report the *plant-wide* VOC emissions in their semi-annual compliance reports.

III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Alternative Operating Scenarios:** The source is allowed to utilize a portable vapor combustion unit (flare) to control VOC and HAP emissions from the terminal loading rack when the carbon adsorption unit is offline (not in operation). Also, the company may use propane as the gas-assist fuel for the vapor combustion unit (enclosed flare) at the barge loading operation in the event the natural gas supply is curtailed.
5. **Compliance Status:** Marathon Petroleum Company, LLC is required to submit their annual Compliance Certification to the District on or before April 15th of each calendar year. As of the effective date of Permit 87-97-TV (R1), there are no compliance schedules in effect or progress reports required.
6. **Emission Factors:** The following emission factors shall be used unless more accurate District approved emission factors become available.

Equipment	Product	Emission Factor	EF Source
Loading Rack	Gasoline	0.083 lb VOC/1000 gal	Stack Test ¹
Loading Rack	Fuel Oil	2.2 x 10 ⁻⁶ lb VOC/1000 gal	AP-42 Section 5.2-2
Barge	Gasoline	0.092 lb VOC/1000 gal	Stack Test ²
Barge	Fuel Oil	0.012 lb VOC/1000 gal	AP-42 Section 5.2-6
Barge	Gas Oil (heavy distillate)	0.012 lb VOC/1000 gal	AP-42 Section 5.2-6
Barge	Ethanol	0.092 lb VOC/1000 gal	Stack Test ²
Railcar Spur (vapor in hose)	Ethanol	0.33 lb VOC/load	LMAPCD Engineering Judgement
Truck Fugitive	Gasoline	9 mg VOC/l loaded	See footnote 4
Flanges/connectors Liquid - 5,265 components Vapor - 30 components	Liquid	0.000023	API ³
	Vapor	0.000067	API ³
Loading Arm Valves Liquid - 37 components Vapor - 5 components	Liquid	0.00087	API ³
	Vapor	0.045	API ³
Meters Liquid - 19 components Vapor - 0 components	Liquid	0.00025	API ³
	Vapor	0.0014	API ³
Pressure relief/ball valves Liquid - 532 components Vapor - 0 components	Liquid	0.00025	API ³
	Vapor	0.0014	API ³
Pump seals Liquid - 60 components Vapor - 0 components	Liquid	0.00093	API ³
	Vapor	0.00093	API ³

Equipment	Product	Emission Factor	EF Source
Valves Liquid - 761 components Vapor - 213	Liquid	0.00016	API ³
	Vapor	0.00015	API ³

Notes:

- ¹ Truck loading emission factor for gasoline from June 1999 stack test (1.10 mg VOC/l). At the requested emission limit of 10 mg VOC/l gasoline loaded = 0.083 lb/1000 gallons.
- ² Barge loading emission factor for gasoline from May 4, 2000 stack test. 10.87 mg VOC/l.
- ³ Equipment leak emission factors are in units of lb/hr/component from API Publication No. 4588, "Development of Fugitive Emission Factors for Petroleum Marketing Terminals, March 1993.
- ⁴ Tanker truck fugitive emission factor based on Background Information Document for the Gasoline MACT, 40 CFR Subpart R

7. Insignificant Activities

Equipment	Quantity	Basis for Exemption
VOC Storage tank less than 250 gallons	1	Regulation 2.02, 2.3.24
Storage tanks - diesel or fuel oil (not for sale)	2	Regulation 2.02, 2.3.25
Brazing, soldering or welding	1	Regulation 2.02, 2.3.4
Lab ventilating (non radioactive materials)	1	Regulation 2.02, 2.3.11
Blast cleaning - abrasives in water	1	Regulation 2.02, 2.3.13
Soil or groundwater remediation (passive)	1	Regulation 2.02, 2.3.20
Portable diesel or gasoline tanks < 500 gal	1	Regulation 2.02, 2.3.23
General Building Maintenance (Painting)	N/A	EPA White Paper
Oil/water separator (< 200 gal/day)	2	Exempt by rule Regulation 6.26, Section 1
Storage Tanks #164, #166, #167, #169 (fuel oil, kerosene, Jet A or Gas Oil)	4	Regulation 2.02, 2.3.9.2
Storage Tanks #96, #97, #98, #132 (fuel oil, kerosene, Jet A or Gas Oil)	4	Regulation 2.02, 2.3.9.2
Storage Tank AA-1-183 (E32) 100 gallon	1	Exempt by rule Regulation 7.12

- a. Insignificant Activities are only those activities or processes falling into the general categories defined in District Regulation 2.02, Section 2, and not associated with a specific operation or process for which there is a specific regulation. Equipment associated with a specific operation or process (Emission Unit) shall be listed with the specific process even though there may be no applicable requirements. Information contained in the permit and permit summary shall clearly indicate that those items identified with negligible emissions have no applicable requirements.
- b. Activities identified In District Regulation 2.02, Section 2, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source.
- c. For all insignificant activities that emit regulated air pollutants for which the company has accepted a plant-wide synthetic minor limit, the company shall maintain sufficient records to calculate the emissions and report those emissions in the semi-annual compliance reports and the annual emissions inventory report.
- d. The Insignificant Activities table is correct as of the date the permit was proposed for review by the USEPA, Region 4. The company shall submit an updated list of insignificant activities annually with the Title V compliance certification pursuant to District Regulation 2.16, section 4.3.5.3.6.