DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B603758800

FACILITY: MPLX Terminals LLC - Bay City Marquette Terminal		**SRN / ID:** B6037
LOCATION: 1806 MARQUETTE ST, BAY CITY		**DISTRICT:** Bay City
CITY: BAY CITY		**COUNTY:** BAY
CONTACT: Faith Taylor , Environmental Professional as of 2-11-21		**ACTIVITY DATE:** 06/30/2021
STAFF: Gina McCann	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Inspection of PTI 223-96E.		
RESOLVED COMPLAINTS:		

On June 30, 2021, I (GLM) conducted an on-site inspection at the Marathon Petroleum Corporation Marquette St. facility. I was accompanied by Mr. Rick Vermesch, Terminal Manger and Ms. Faith Taylor, Environmental Professional. At the time of the inspection, MPLX was in compliance with applicable regulations.

The Marquette street facility was issued PTI 223-96E for a petroleum distribution terminal on August 8, 2016. The permit application requested an additional emission unit, EUSUMP. The facility is an existing minor stationary source w/facility wide Title V "Opt-out" limits including 90 tons VOC, 9 tons individual HAP and 22.5 tons total HAPs. Operations at the facility include the receipt of gasoline and distillate fuel products from a pipeline, some ethanol and fuel additives delivered by truck, temporary storage of these products in onsite tanks, and in line blending & pumping of gasoline, gasoline additives, & distillate fuel oil with the capability to distribute to trucks or marine vessels.

The site has affected facilities subject to 40 CFR 60, Subpart Kb, XX, and 40 CFR Part 63, Subpart BBBBBB. The PTI 223-96E contains emission limits, material limits, and operating conditions for tanks, a truck loading rack, a vapor collection system, ship and barge loading, and, associated valves and fittings for the activities. The loading rack emissions are controlled by a vapor combustion unit. During my site visit I viewed the truck loading rack, vapor recovery unit (VRU), EUSUMP and on-site and electronic records.

Most records are kept electronically. The tank inspections are conducted by on site staff with PDA's containing software to record observations. Attached are copies of the most recent tank inspection reports for EU107. EU107 was last inspected on May 14, 2012. Throughput values into and out of tanks are tracked with flow meters that send the information to a database used company wide. The facility's meters are calibrated and maintained by Marathon staff and fuel supplier staff.

EURACK: Compliant

The truck loading racks are subject to 40 CFR Part 60, Subpart XX (Standards of performance for Bulk Gasoline Terminals). The affected facility is the total of all the loading racks which deliver product into tank trucks. The three lane loading rack is equipped with a vapor recovery unit (VRU) and uses a vapor combustion unit (VCU) as a backup control. The drivers access the site through use of a "TWIK card" that contains required information e.g. background checks, leak checks. The trucks then enter the loading bay where the drivers use the card to gain access to the pump. The driver first has to hook up a "Scully", which provides an electrical ground for the truck and has over-fill protection on it. The "Scully" system also contains metering

that is automatically reviewed and reconciled every 24 hours for accuracy. Next the driver hooks up a vapor recovery hose which is sent to the VRU. Each truck must have a current vapor tightness test (VTT) certification on record to access the fuel loading rack. Each bay has a meter and control device that records flow and delivers the fuel blend as determined by each truck driver's information. Each truck can carry more than one fuel type if equipped w/multiple compartments.

Special condition (SC) IV.1 requires written procedures for the operation of all the control measures be available in an accessible location near the transfer equipment. During the inspection I asked where the instructions were located and received a copy. They appeared to be within an accessible location near the transfer equipment.

The loading rack throughput and other information required by PTI 223-96E and NSPS XX is maintained in the corporate wide database and reviewed by on site personnel and corporate staff.

NSPS XX limits the emissions from the loading of liquid product into the atmosphere to 80 mg TOC/ liter of gasoline loaded. In October 2014 MDEQ staff observed USEPA Method 21 testing of the loading rack components and trucks using the loading rack. Emissions were below NSPS threshold. NSPS XX also requires annual vapor tightness test. Additionally, SC VI.5 requires records of compliance with the appropriate leak test for each delivery vessel. During the inspection I randomly pulled leak test reports from two trucks. The Forward and Alpina Oil trucks were last leak tested March 26, 2021 and September 27, 2020.

The truck loading rack vapor collection system is piped to the vapor recovery unit (VRU). The VRU recovers one gallon of gas per 1,000 gallons loaded. It has two carbon units that alternate in operation. Hydrocarbons passively accumulate in one carbon unit then vacuum is applied at a pre-set concentration. The VRU has an instantaneous read CEMS. The cycle takes about 15 minutes between vacuum. The data is transferred to a recording unit in a separate control building (VRU shed). During the inspection the VRU had no visible emissions and appeared to be operating properly.

If the VRU shuts down, operators can access "MAPLINE" for notifications and corrections. Planned and unplanned downtimes are tracked.

The last RATA and performance stack test of the VRU was on October 6, 2020. The report states that there were no concerns with the test.

The thermocouple on the vapor combustion unit (VCU) was last inspected on 10/6/2020 and 11/12/2019. The thermocouple passed inspection. If it did not meet expectations, the facility would replace it as opposed to calibrating it. Because the combustor has only run for 79 days total in the last 7.5 years, it has not experienced significant wear and the thermocouple continues to perform as designed. The VCU is used as a back-up to the VRU and does not run often. The VCU operated October 7, 2020 and April 22-23, 2020. According to the malfunction abatement plan (MAP), received September 4, 2013, the normal operating range is 200-1200F and the VCU will typically operate at levels less than 800F if receiving mostly diesel fuel.

I reviewed the records for EURACK. All required information was available and is maintained in the corporate wide database. The terminal is permitted for 668,020,100

gallons of total liquid product per 12-month rolling time period. The 12-month rolling total liquid product to the loading rack ending May 2021 was 265,799,070 gallons. SC II.1.a. restricts gasoline throughput to 525,598,200 gallons per 12-month rolling time period. The 12-month rolling total of gasoline for the same time period was 213,830,669.

The 12 month rolling total of VOC fugitive emissions for the 12 month rolling time period ending May 2021 was 10.67 ton per year with a limit of 25.0 tpy. The VOC emissions through the vapor recovery unit, vapor combustor, or flare for the same 12 month rolling was 12.76 tons per year with a limit of 28.0 ton per year.

To minimize loading rack control device downtime, Marathon maintains a malfunction abatement plan (MAP). The MAP includes recordkeeping provisions for part replacements, repairs and maintenance, procedures for maintaining and operating EURACK, the loading rack control device, and monitoring equipment. Marathon also implements a program for corrective action for all malfunctions. Records are kept electronically.

The facility is required to maintain and operate a device to monitor and record the vapor combustor temperature on a continuous basis. A CEMS unit records the data. The facility completed the last CEMS RATA on 10/6/2020 and results were within 10% of the standard (1.8% mg/l comparison, 4% direct comparison of concentration of standard).

EUSHIP: Compliant

There has not been a marine vessel loaded for several years. The appropriate records are maintained.

FGFRTANKS: Compliant

Floating roof tanks EU5, EU9, and EU108 are subject to 40 CFR Part 60, Subpart Kb (Volatile Organic Liquid storage vessels). Tank inspection records are maintained electronically and available through the company wide database. The inventory in each tank is based on tank levels. Suppliers also provide flow information to the site.

SC IV.1. sets the design parameters for each of the tanks on-site. I asked the facility to show compliance with this requirement while on-site. They walked me through and aerial view of the plant where the type of tank could be identified. They offered design spec sheets to show seal information, but I declined. This information would have been reviewed during the permitting process.

SC III.3. requires tanks EU30-1, EU55-7, EUT-2-5, EU10-12, EU107 and EU108 to comply with the NSPS Kb. The facility inspects the tanks every six months. The last two inspection dates were as follows:

Tank ID	Inspection Date	Inspection Date
EU30-1	6/17/21	3/25/21

EU30-3	6/17/21	3/22/21
EUT-2-5	6/22/21	3/22/21
EU55-6	6/22/21	3/22/21
EU55-7	6/22/21	3/22/21
B6037EU10-12	6/17/21	3/25/21
EU108	6/17/21	3/23/21

The electronic records for 12 month rolling throughput and VOC and HAP emission values for the period ending May 2021 were reviewed. The total 12-month VOC emissions for tank 108 (EU108) was 3.51 tons. The VOC emission limit for EU108 is 15 ton per year.

FGFACILITY: Compliant

Daily, monthly, and annual emissions for VOCs, each HAP and total HAPs, are tracked using electronic metering on each tank, the truck loading bays, and the VCU. Marathon has an Electronics Services technician group that maintains meters and alarms.

The facility is a HAPs opt-out plant with individual HAP limits of less than 9 tpy and aggregate HAP limits less than 22.5 tpy. It is also a synthetic minor permit for VOCs with facility wide limit at less than 90 tpy. The 12 month rolling total emissions for VOCs ending the 12-month time period May 2020 was 33.24 tons. Hexane had the highest emissions for the same time period at 0.523 tpy and the aggregate HAP emissions for this time period were 1.71 tpy.

EUSUMP

SC III.1. requires EUSUMP to be operated in a manner which minimizes the introduction of air contaminants to the air. This includes keeping the hatch on EUSUMP closed at all times that the hatch is not in use. At the time of the inspection the hatch was not in use and it was closed.

40 CFR Part 63, Subpart BBBBBB

Per the GACT (Generally Available Control Technology) the facility chose to install a carbon absorption device to control emissions, thereby requiring a continuous emissions monitoring system (CEMS). AQD received the associated required reports.

At the time of the inspection, MPLX was in compliance with applicable regulations.

NAME _____ DATE 8/13/2021 SUPERVISOR _____