DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B603742601

FACILITY: MPLX Terminals LLC - Bay City Marquette Terminal		SRN / ID: B6037
LOCATION: 1806 MARQUETTE ST, BAY CITY		DISTRICT: Saginaw Bay
CITY: BAY CITY		COUNTY: BAY
CONTACT: Jackie Gast , Site Environmental Professional, P.E.		ACTIVITY DATE: 11/30/2017
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Inspection of SM-Opt Out PTI #223-96D		
RESOLVED COMPLAINTS:		

On November 30, 2017, I (GLM) conducted an announced inspection at the Marathon Petroleum Corporation Marquette St. facility. I was accompanied by Ms. Meg Shehan, MDEQ-AQD, Marathon representatives Mr. Rick Vermesch, Terminal Manger, Mr. John Wills, Environmental Professional and Judson McCullock, Flint terminal supervisor. Mr. Greg Adamczyk, Terminal Manager retired and Ms. Jackie Gast, Environmental Professional, accepted a new position. Mr. John Wills was the interim Environmental Professional. 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 facility's MAERS 2016 submittal reported nearly 250 million gallons of product throughput with 35.69 tons VOCs emitted. 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), CEMS trailer, tanks, associated piping & valves, and on-site and electronic records.

All 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 ethanol tank, 10-12. 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.

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. During the site visit vapor tightness tests were requested for Autore oil and propane truck #8534 and Forward truck trailer #D189060. Attached are the copies of their vapor tightness compliance checks. They appear to be in compliance.

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 are operated singularly. 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, 2015 & observed by MDEQ staff from the TPU. The report states that there were no concerns with the test.

I reviewed the records for EURACK. All required information was available and is maintained in the corporate wide database. The 12 month rolling total liquid product to the loading rack from November 1, 2016 thru October 31, 2017 was 305,953,720 gallons. The 12 month rolling total of gasoline for the same time period was 255,614,759. The total liquid product and total gasoline 12 month totals ending October 31, 2017 were below permitted material limits.

The 12 month rolling total of VOC fugitive emissions for the 12 month rolling time period from November 1, 2016 through October 31, 2017 was 12.59 ton per year with a limit of 25.0 tpy. The VOC emissions through the vapor recovery unit, vapor combustor, or flare for the 12 month rolling time period from November 1, 2016 thru October 31, 2017 was 15.26 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, attached are records for November 30, 2017 for the VRU.

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.

The electronic records for 12 month rolling throughput and VOC and HAP emission values for November 1, 2016 thru October 31, 2017 were reviewed. The total 12 month VOC emissions for tank 108 (EU108) was 7,197 lbs (3.59 tons) with a range of 740 lbs VOC emitted in September 2017 to 391 lbs VOC emitted in January 2017. 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.

Facility wide records of emissions and the basis for the calculated values are attached for the period of November 1, 2016 thru October 31, 2017. The 12 month rolling total emissions for VOCs was 34.78 tons. Total emissions for benzene = 0.39 ton, ethylbenzene = 0.034 ton, hexane = 0.550 ton, toluene = 0.448 ton, trimethylpentane(2,2,4) = 0.275 ton, and xylene= 0.174 ton, naphthalene=0.001 tons, and cumene=0.003 tons. Total HAPs emissions were 1.795 ton per year.

EUSUMP: Did not check compliance

<u>40 CFR Part 63, Subpart BBBBBB</u>
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.

CC: Meg Sheehan, MDEQ-email

NAME Mina L. McCann DATE 12/14/17 SUPERVISOR C Grace