

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

B603730691

FACILITY: Marathon Petroleum Company LP-BayCity Marquette St		SRN / ID: B6037
LOCATION: 1806 MARQUETTE ST, BAY CITY		DISTRICT: Saginaw Bay
CITY: BAY CITY		COUNTY: BAY
CONTACT: Greg Adamczyk , Terminal Manager		ACTIVITY DATE: 08/05/2015
STAFF: Gina McCann	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Inspection of SM-Opt Out PTI #223-96D		
RESOLVED COMPLAINTS:		

On August 5, 2015, I (GLM) conducted an announced inspection at the Marathon Petroleum Corporation Marquette St. facility. I was accompanied by Marathon representatives Mr. Greg Adamczyk, Terminal Manger, and Ms. Sabrina Wilkin, Environmental Professional. The Marquette street facility was recently issued PTI 223-96D for a petroleum distribution terminal on April 21, 2015. The permit application requested an increase in the VOC limit for FGFRTANKS from 5.0 TPY to 15.0 TPY. The increase was to accommodate the gasoline storage and transfer requirements for the terminal during routine inspection and maintenance activities. 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 2014 submittal reported nearly 308 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 BBBB.

The PTI 223-96D 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), tanks, ship and barge loading area, associated piping & valves, and on-site and electronic records.

A map and aerial photo of the facility are attached. 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 tank 55-7 and 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 "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 223-96D 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.

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. Completed Preventative Maintenance forms for the VRU for the week of July 29, 2015 thru August 4, 2015 are also attached.

The last RATA and performance stack test of the VRU was on October 8, 2014 & observed by MDEQ staff from the TPU. The report states that there were no concerns with the test.

I reviewed the onsite records for the month of June 2015 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 July 2014 thru June 2015 was 316,900,185 gallons. The 12 month rolling total of gasoline for the same time period was 234,258,093. The total liquid product and total gasoline 12 month totals ending June 2015 were below permitted material limits.

The 12 month rolling total of VOC fugitive emissions for the 12 month rolling time period from July 2014 through June 2015 was 1.6 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 July 2014 through June 2015 was 14.36 ton 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 August 5, 2015 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 July 2014 through June 2015 were reviewed. The total 12 month VOC emissions for tank 108 (EU108) was 6,860 lbs (3.43 ton) with a range of 463 lbs VOC emitted in May 2015 to 678 lbs VOC emitted in October 2014. The VOC emission limit for EU108 is 15 ton per year.

At the time of the inspection tank 55-7 was empty and had been removed from service. During a routine inspection under 40 CFR 60.113b(a)(2), the ladder seal was found to be in need of replacement. While performing the repair the contractor discovered the primary seal was damaged. Notification under 40 CFR 60.113b(a)(4) was received May 14, 2015 to empty and remove the tank from service within 45-days of discovery. Once the tank was emptied the contractor noticed the regulator that keeps the floating roof from twisting was not operating as they would like and allowed the roof to twist causing damage to the shoes. The shoes are being replaced and an improved regulator is being installed.

**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 July 2014 through June 2015. The 12 month rolling total emissions for VOCs was 35.23 tons. Total emissions for benzene = 0.322 ton, ethylbenzene = 0.035 ton, hexane = 0.555 ton, toluene = 0.452 ton, trimethylpentane(2,2,4) = 0.278 ton, and xylene = 0.176 ton, naphthalene = 0.001 tons, and cumene = 0.004 tons. Total HAPs emissions were 1.812 ton per year.

**40 CFR Part 63, Subpart BBBBBB**

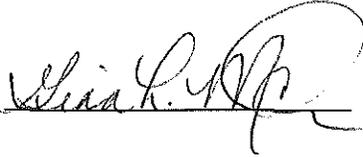
Per the GACT (Generally Available Control Technology) the facility chose to install a carbon absorption device to control emissions, thereby requiring a continuous emissions monitoring system (CEMS). Data is attached for August 5, 2015. AQD received the associated required reports.

**Exempt Equipment**

As part of the permit modification FGFIXEDROOFTANKS were removed from the PTI. They were exempt from Permit to Install requirements. Tanks EU16, EU17, EU18, EU19, and EU 21 are fuel additive tanks exempt under Rule 284(l). Tank EU2 (kerosene) and Tank EU11 (diesel) are exempt under Rule 284 (d). Additionally, the facility provided PTI exemption determination for the butane storage, transfer, and blending operation. The 90,000 gallon capacity above ground pressurized storage tank and butane truck off-loading area is exempt from obtaining a PTI pursuant to Rule 284(j).

The facility maintains determination documentation. The determination document for the butane storage and operation is attached.

NAME



DATE

9/2/15

SUPERVISOR

