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

B428245839

FACILITY: Marysville Hydrocarbons, LLC.		SRN / ID: B4282
LOCATION: 2510 Busha Highway, MARYSVILLE		DISTRICT: Southeast Michigan
CITY: MARYSVILLE		COUNTY: SAINT CLAIR
CONTACT: Jeremy Macker , Operations Supervisor		ACTIVITY DATE: 08/13/2018
STAFF: Rem Pinga	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Level 2 Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 13, 2018, I conducted a level 2 scheduled inspection at Marysville Hydrocarbons LLC (MHC), located at 2510 Busha Highway in Marysville, Michigan. The purpose of the inspection was to determine the facility's compliance requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Quality Division (AQD) Administrative Rules and the facility's Opt-out Permit to Install (PTI) No. 55-11A. Prior to the walk-through inspection, I met and conducted a pre-inspection meeting with Jeremy Macker, Operations Supervisor and facility contact person. Mr. Macker accompanied me during walk through inspection. Mr. Matthew Findlay, Sr. is the corporate environmental contact.

DCP Midstream, LP acquired Marysville Hydrocarbons, LLC from the owners of Marysville Ethanol, LLC. Until the 1980's the facility was also operating as a fractionation plant. As mentioned in the 08/14/2014 inspection report, the fractionation plant is now mothballed and the process equipment have been removed. At that time, the facility was considered a Title V major source and operated under Renewable Operating Permit (ROP) No. MI-ROP-B4282-2005. As a result of the dismantling of the fractionation plant, the company voided the ROP and obtained a synthetic minor (Opt-out) permit to install. A synthetic minor permit, PTI No. 55-11, was issued in 2011. A revised permit to install, PTI No. 55-11A, was issued on May 22, 2014. The revised PTI was for the installation of two 90,000-gallon pressurized storage tanks with associated loading racks.

MHC operates two 12-hour shifts per day, 24 hours per day, and seven days per week. MHC is currently in the business as a storage and transfer facility of hydrocarbons in the form of liquified petroleum gas (LPG) for independent customers. During the summer months, MHC receives LPG, either as normal butane, mixed butane, and/or propane; and stores the hydrocarbons in underground caverns. During the winter months, MHC withdraws the LPG from the caverns by injecting brine water to displace the LPG, processes the LPG, and transfers/delivers the hydrocarbons to customers. The facility has storage capacity of over seven million barrels (bbls) of hydrocarbons. Storage is achieved through 11 underground brine displacement caverns. The company develops the caverns using a weak brine solution. The caverns range in capacity from 300,000 bbls to 1,000,000 bbls. They are maintained with a pressure of approximately 600 psi at the surface. Three brine ponds are used to maintain the hydrocarbon levels within the caverns. The ponds are emptier in the spring and summer months when hydrocarbon demands are lowest.

They are fuller in the fall and winter months when hydrocarbon demands are highest. Each brine pond is equipped with a safety igniter to destroy any hydrocarbon present in the brine during circulation start-up or during malfunction events. Excess brine is disposed in 2 disposal wells on-site (BDW 1-7 & BDW 2-7). Hydrocarbons are transferred/moved, both inbound and outbound, through five in-service pipelines, railroad cars, and truck transport.

PTI No. 55-11A contained 11 emission units (EUs). The applicable requirements were lumped into 3 flexible groups per the PTI No. 55-11A table below:

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EULPGLOADFUG	Fugitive emissions from truck loading and unloading operations.	FGFACILITY
EUBLOWDN&PURGE	LPG truck loading/rail loading purge operations and pressure relief devices. During truck/railcar loading, vessel purging is occasionally conducted before loading. Pressure relief devices also vent to the purging system. VOC emissions from purging operations and pressure relief devices are controlled by the flare at all times.	FGFLARE FGFACILITY
EUSTORAGEFB7001	Internal floating roof storage tank (3,335,000 gal) for petroleum product.	FGSTORAGETANKS FGFACILITY
EUSTORAGEFA8100	Pressurized LPG storage tank (90,000 gal) used as an intermediate tank between the railcars and caverns. The storage tank is equipped with closed loop loading. There is an emergency relief valve on the tank which vents to the flare. The relief valve is in the closed position at all times except during emergency use.	FGSTORAGETANKS FGFACILITY
EUSTORAGEFA8101	Pressurized LPG storage tank (90,000 gal) used as an intermediate tank between the railcars and caverns. The storage tank is equipped with closed loop loading. There is an emergency relief valve on the tank which vents to the flare. The relief valve is in the closed position at all times except during emergency use.	FGSTORAGETANKS FGFACILITY
EUSTORAGEFB7003	Fixed roof storage tank (4,757,000 gal) used to store liquefied petroleum product (Pentane Plus). Emissions are controlled by the Vapor Recovery System (overall control efficiency – 99%). The storage tank is also equipped with a pressure relief valve which vents to atmosphere.	FGSTORAGETANKS FGFACILITY
EUFLARE	The flare is used to burn excess liquefied petroleum gas vapor from the facility.	FGFLARE FGFACILITY
EUB&PLOAD	Two new loading racks for loading and unloading trucks with butane and propane.	FGFLARE, FGFACILITY
EUB&PLOADFUG	Fugitive emissions from two new loading racks for loading and unloading trucks with butane and propane.	FGFACILITY

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUSTORB&P1	Pressurized butane and propane storage tank (90,000 gal). The storage tank is equipped with closed loop loading. There is an emergency relief valve on the tank which vents to the atmosphere only during times of an emergency. The relief valve is in the closed position at all times except during emergency use.	FGFACILITY
EUSTORB&P2	Pressurized butane and propane storage tank (90,000 gal). The storage tank is equipped with closed loop loading. There is an emergency relief valve on the tank which vents to the atmosphere only during times of an emergency. The relief valve is in the closed position at all times except during emergency use.	FGFACILITY

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGFLARE	The flare is used to burn excess liquefied petroleum gas vapor from the facility.	EUBLOWDN&PURGE, EUFLARE, EUB&PLOAD
FGSTORAGETANKS	Internal floating roof storage tank (3,335,000 gal) for petroleum product (EUSTORAGEFB7001), fixed roof storage tank (4,757,000 gallons) used to store liquefied petroleum product (EUSTORAGEFB7003), and pressurized LPG storage tanks (90,000 gallons) used as intermediate tanks between the railcars and caverns (EUSTORAGEFA8100 & EUSTORAGEFA8101).	EUSTORAGEFB7001, EUSTORAGEFA8100, EUSTORAGEFA8101, & EUSTORAGEFB7003
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

FGFLARE - In addition to controlling emissions from LPG loading and unloading activities, the flare is used to safely control VOCs from blow down. Blow down is the discharge of hydrocarbons from pressure relief devices. Per PTI No. 55-11A special condition FGFLARE(III)(2 & 3), the company showed that the exit velocity of the flare is less than 400 ft/sec. and the net heating value of the gas used by the flare is greater than 300 BTU/scf. Per PTI No. 55-11A special condition FGFLARE(III)(1 & 5), I verified during walk through inspection that the flame is present and the safe operating procedure is in place to ensure input feed to the flare does not occur during flare flame out. Per PTI No. 55-11A special condition FGFLARE(VI)(1 & 2), the flare operators continuously monitor the presence of four pilot flames using thermal couples, which transmit data to a control panel. If any of the pilot flames are extinguished, an audio and visual alarm are signaled by the control panel and the operators immediately pursue corrective actions. The operators also monitor flare operation by camera. Flare operations, including pilot outages and visible emissions, are recorded once per shift on a Lead Plant Operator Log. Marysville Hydrocarbons has three back-up methods to be used to re-light pilots in the case of a flare outage: flame throwing generator, electronic sparker, and a flare gun.

FGSTORAGETANKS - This flexible group pertains to EUSTORAGEFB7001 (Tank 7001), EUSTORAGEFB7003 (Tank 7003), EUSTORAGEFA8100 (Tank 8100), and EUSTORAGEFA8101 (Tank 8101). Tanks 8100 & 8101 (bullet tanks) are pressurized storage tanks, each with a capacity of 90,000 gallons. The company continues to use the bullet tanks for intermediate storage of LPG between the caverns and the loading/unloading station. Each bullet tank has dual emergency relief valves, which vent to the flare. Each bullet tank is equipped with one manway opening. The manways are kept covered except during instances of internal tank inspections. The company follows Lockout and Tagout Procedures each time the manway is opened. The company maintains procedures and work order records for lockout and tagout events on-site. Tanks 7001 and 7003 remain at the property but out of service. Per PTI No. 55-11A special condition FGSTORAGETANKS(III)(1 & 3), I verified that Tanks 7001 and 7003 are out of service. Per PTI No. 55-11A special condition FGSTORAGETANKS(III)(2 & 4), the bullet tank openings have seals in closed position at all times and safety relief valves that are vented to the flare.

FGFACILITY - This flexible group limits the facility volatile organic compound to 56 tons per year (TPY) thus making the facility synthetic minor for the Clean Air Act of 1990, Title V, ROP, and the PTI No. 55-11A an Opt-out permit. Per PTI No. 55-11A special condition FGFACILITY(I)(1), the facility submitted MAERS report with recordkeeping showing a total VOC of 10.05 tons for CY 2017, and less than the 56 tpy permit limit. Records were kept in monthly 12 month rolling totals.

The company has 2 natural gas fired emergency generators exempt from permit to install requirements pursuant to MDEQ-AQD Administrative Rule 285(g). The first generator is a 200 KW RICE engine with manufacture date of July 2008. Inspection requirements, tune-up, and oil change were conducted on 04/13/2018. I observed the non-resettable hour meter at 530.18 hours. The second emergency generator was a small portable GENERAC natural gas fired unit installed outside the office building.

The company also has two diesel backup fire pumps, rated at 275 HP each. These units are exempt from permit to install requirements pursuant to Rule 282(b). Each pump is equipped with a non-resettable meter to measure hours of operation. During inspection, I observed the non-resettable hour meter readings at 759.9 hours for Unit 6A 6002 S and the oil/filter change date at 06/25/2018. Unit 6A 6002 B showed 554.2 hours for the non-resettable hour meter and oil/filter change at 7/23/3018. The company tests the emergency generator and the fire pumps on a weekly basis. These units are all located in the Fire Water Pump House. The facility maintains two large above ground tanks, with a total capacity of 1.6 million gallons, for storing water for the fire pumps.

Overall, I did not find any non-compliance issues during inspection.

NAME [illegible] DATE 8/30/2018 SUPERVISOR [illegible]