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

B428227138

FACILITY: Marysville Hydrocarbons, LLC.		**SRN / ID:** B4282
LOCATION: 2510 Busha Highway, MARYSVILLE		**DISTRICT:** Southeast Michigan
CITY: MARYSVILLE		**COUNTY:** SAINT CLAIR
CONTACT: Robert Ratkus , Senior Plant Supervisor		**ACTIVITY DATE:** 08/14/2014
STAFF: Rem Pinga	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Level 2 Target Inspection		
RESOLVED COMPLAINTS:		

On August 14, 2014, I conducted a level 2 target 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 No. 55-11A and a newly issued Permit to Install No. 56-14. Prior to the physical inspection, I initially showed my credentials, stated the purpose of my visit, and provided a copy of the "Environmental Inspections: Rights and Responsibilities" to Robert Ratkus, Senior Plant Supervisor and facility contact person.

DCP Midstream, LP acquired Marysville Hydrocarbons, LLC from the owners of Marysville Ethanol, LLC
and now runs as an independent company. Until the 1980's the facility wasalso operating as a fractionation plant. The fractionation plant is nowmothballed and most of the equipment have been removed. Nearly allof the fractionation equipment has been removed. At that time the facility wasconsidered a Title V major source and operatedunder Renewable Operating Permit (ROP) No. MI-ROP-B4282-2005. As a result of the dismantle of the fractionation plant, the company has voided the ROP and obtained a synthetic minor (OptOut) permit to install. The synthetic minor permit, PTI No. 55-11,was issued in 2011 but now has been revised to PTI No. 55-11A, issued on May22, 2014. The revision was for the installation of 2 additional 90,000gallon pressurized storage tanks with associated loading racks.
PTI No. 56-14 was issued for a temporary flare to incinerate proposed blowdown from pipeline maintenance. Currently, the facility has requested to void PTI No. 56-14 due to the company's decision not to install the flare and conduct blowdown. During the inspection, I verified that the pipeline maintenance being proposed under PTI No. 56-14 has not been conducted.

MHC operates 24 hours per day and seven days per week. They run three eight hour shifts pe day. MHC functions as a hydrocarbon storage and transfer facility. They are currently storing and transferring; normal butane, mixed butane, and propane. Their storage capacity is over seven million barrels (bbls) of hydrocarbons. The company only handles hydrocarbons in liquid form, known as liquidified petroleum gas (LPG). Storage is achieved through ten underground brine displacement caverns. An eleventh cavern is currently under development. The compan develops the caverns using a weak brine solution provided via pipeline by Cargill, Inc. When th brine displacement water is saturated it is sent back to Cargill for processing. 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. Two brine ponds, with a total capacity of approximately 6.4 million bbls, are used to maintain 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, which are used to destroy any hydrocarbon present in the brine during circulation start-up or during malfunction events. The transfer of hydrocarbons, both inbound and outbound, gets done primarily through five in-service pipelines, railroad cars, truck transport.

PTI No. 55-11A has 11 emission units whose applicable requirements were lumped into three flexible groups. The emission units are:

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

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

The flexible groups are:

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs

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. Marysville Hydrocarbons has a

agreement with neighboring facility, Flint Hills Resource Company, to allow Flint Hills to vent VOCs from their operations to the flare. The flare is designed to handle maximum possible emissions from each plant. Per PTI No. 55-11A special condition FGFLARE(III)(& 3), the company provided calculations to show that the exit velocity of the flare is less than 400 ft/sec. and provided documentation to show that the net heating value of the ga used by the flare is greater than 300 BTU/scf. Per PTI No. 55-11A special condition FGFLARE(III)(1 & 5), I verified flame is present during inspection 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 alarm, bot audio and visual, is 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. A flare outage report, which summarizes the flare changes listed on the operator log, is also maintained on a monthly basis. In the event of a flare outage (all four pilots are extinguished), the operator would immediately notify Flint Hills Resource Company by phone and/or radio. Flint Hills also has a camera and computer system to monitor the flame. 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 th bullet tanks for intermediate storage of LPG between the caverns and the loading/unloading station. Each bullet tank has dual emergency relief valves, which ven 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 Tagging Procedures each time the manway is opened. The company maintains procedures and work order records for lockout and tagging events on-site. Tanks 7001 and 7003 have been closed since 2004. Per PTI No. 55-11A special condition FGSTORAGETANKS(III)(1 & 3), I verified Tanks 7001 and 7003 closed. Per PTI No. 55-11 special condition FGSTORAGETANKS(III)(2 & 4), the tank openings have seals in closed position at all times and safety relief valves that are vented to the flare. Per PTI No. 55-11A special condition FGSTORAGETANKS(VI)(1), inspections are done monthly and the facility keeps records of inspections.

FGFACILITY - This flexible group limits the facility volatile organic compound to 56 tons per yea (TPY) thus making the facility synthetic minor for the Clean Air Act of 1990, Title V, ROP, and making 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 7.5 tons for CY 2013, and less than the 56 tpy permit limit. Records were kept in monthly 12 month rolling totals.

The company has one natural gas fired turbine emergency generator. The emergency generat is exempt from permitting pursuant to Rule 285(g). The company also has two diesel backup fi pumps, rated at 275 HP each. These units are exempt from permitting pursuant to Rule 282(b) Each pump is equipped with a non-resettable meter to measure hours of operation. 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 company has two large above ground tanks, wit a total capacity of 1.6 million gallons, which store water for the fire-water pumps.

I observed one parts washer in the Maintenance Building. During the inspection, the cover was closed and safety procedures were posted.

Overall, I did not find any deviations during inspection.

NAME KMS DATE 9/26/2014 SUPERVISOR CTE