

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

B664649366

FACILITY: Sunoco Pipeline L.P. - Marysville Pump Station		SRN / ID: B6646
LOCATION: 250 Murphy Drive, MARYSVILLE		DISTRICT: Southeast Michigan
CITY: MARYSVILLE		COUNTY: SAINT CLAIR
CONTACT: Scott J. Verhelle, Supervisor, Pipeline Operations, Great Lakes Dist.		ACTIVITY DATE: 07/02/2019
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Onsite Inspection		
RESOLVED COMPLAINTS: C-19-01474		

On Tuesday, July 2<sup>nd</sup>, 2019, Michigan Department of Environment, Great Lakes and Energy-Air Quality Division Staff Kaitlyn Leffert and I, Sebastian Kallumkal, conducted an unannounced, "scheduled" inspection at Sunoco Pipeline, L.P. located at 250 Murphy Drive, Marysville, Michigan. The purpose of the inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Rules; and the conditions of Permit-To-Install (PTI) Number 178-98C for 7 crude oil storage tanks (FGTANKFARM) and EULACTUNIT (Crude oil unloading facility). The purpose of the inspection was also to conduct odor observations to evaluate odor complaints (Complaint No.: C-19-01474) allegedly related to facility's operations.

We arrived in the area at about 10:00 AM. From that time to about 10:15 AM, prior to arriving at Sunoco Pipeline, LP-Marysville, we conducted drive by odor observations, with the front windows of the vehicle down, starting from the intersection of I-94 & Gratiot Avenue along Gratiot Avenue, Allen Road, Cuttle Road, and Murphy Drive until where it ends at 300 Murphy Drive. We did not smell any crude oil smell along this route. We did not see any truck at the crude oil unloading area. The wind was calm, Sky: mostly cloudy, (7-2-2019, 9:55 AM, www.wunderground.com)

We arrived at the facility at about 10:15 AM. At the facility, we met Scott J. Verhille, Supervisor, Pipeline Operations, Great Lakes District and Mr. J. David Misaros, Station Utility Operator. We introduced ourselves and stated the purpose of the inspection.

Sunoco Pipeline, L.P. is a crude oil storage and transport facility. The facility operates 24 hours a day, and 7 days a week. The facility receives crude oil from two Enbridge pipelines (Line 5 and Line 6) and from local oil wells by tanker trucks. The Enbridge pipelines originate in the province of Alberta in Canada. The crude oil from local wells is delivered via trucks to the crude oil unloading facility near the northeast corner of the property (4851 Gratiot Avenue, Marysville). The crude oil unloading process was permitted under PTI No. 642-88. After a 2018 inspection, Energy Transfer Company which owns the crude oil unloading station (previously Sun Refining & Marketing Company) requested AQD to incorporate this permit with the permit 178-98B which is issued to Sunoco Pipeline Company. The crude oil delivered to the unloading facility is transferred and stored in Tank 43 which was permitted under 178-98B.

The Sunoco facility receives sweet, synthetic (from Alberta oil sands), heavy and medium heavy crude oils via pipeline or truck (only sweet crude). The facility keeps Safety Data Sheets (SDS) for crude oils. (Attached). The receipt of any type of crude oil depends on the refinery demands. The benzene and hydrogen sulfide contents are included in the SDS. Total Sulfur and Reid Vapor Pressure (RVP) are measured monthly for each product. Records are kept at the facility.

Scott told us that each shift, an operator makes three trips checking on the piping, pumps, valves, etc. to identify any leaks.

After the pre-inspection meeting, Scott accompanied us to the truck unloading station. The crude oil from trucks is pumped to Tank 43. No truck was unloading at that time. The pump has a meter which measures the crude oil unloaded. We observed that the MARYSVILLE TRUCK UNLOADING STATION CHECK LIST is posted outside the pump shed and the daily log of crude oil deliveries (amount, time, etc.) are kept near the pump. The plastic sump collects any left-over crude oil in the hose that was connected to the truck during unloading. The sump was closed tight at the time of the inspection. I did not smell any crude oil odor near the sump while I was there.

On our way back, we walked near couple of tanks. The tanks are painted white. We did not see any crude oil leaks on the tanks.

The Enbridge facility which is located south and adjacent to Sunoco Pipeline is a separate company and it delivers crude oil via two pipelines (Line 6 coming from Chicago and Line 5 coming from Wisconsin through Michigan Upper Peninsula).

The operators perform monthly and annual inspections of all tanks looking for any abnormalities. He inspects the internal floating roofs for any leaks every month and additional leak inspections (VOC inspections) annually. He told me if there is leak in any of the tank connections, they identify it easily because everything is painted white. He informed me that the seals on all the tanks are inspected every 5 years and a complete inspection of the tanks and replacements are conducted every 20 years.

The facility has only one pipeline to deliver crude oil to refineries. No crude oil is sent out using trucks. The crude oil coming in and going out events are scheduled.

Next, we reviewed the permit requirements. He provided me the copies of the inspection records and the tank throughput. He informed me that the emission calculations are kept by Jared Everitt. More records of the inspections are received via email.

At about 11:50 PM, we left the facility. We drove to the complainant's home on Murphy Drive. I did not smell any crude oil odor near the house. Until 12:30, we talked to the complainant about some of her concerns.

1. The complainant was not pleased that both permits mentioned above was combined. Explained to the complainant that the crude oil from the unloading station is stored in a storage tanks included in the other permit. The crude oil unloading station should not have any emissions if tanker truck is properly operated. Most of conditions in the old permit is incorporated into the new permit.
2. The complainant also wanted the facility to notify the neighbors if any malfunction such as tank leak, roof collapse or an event such as tank degassing occurs. They are the ones who are affected mostly by any emissions from the facility. I informed Scott about this concern and he agreed to discuss it with his management.
3. The complainant also argued that if the internal floating roof for the storage tank was inspected routinely, why did it collapse. In response to this concern, Scott told me that the roof seal is inspected annually. He could not specify a reason for the collapse.
4. The complainant was also concerned with the "flammable water" from the well they are using. I discussed this issue with Greg Barrows, Geologist, MDEGLE/RRD. He informed me that the well water in the complainant's well was tested in conjunction with St. Clair Health Department and they found that water contains methane which is flammable in high concentrations. He explained that the methane is naturally occurring in that area and it comes out when water is taken out.
5. The complainant had concerns regarding the excess emissions that occurs during the degassing of the tanks. I informed the complainant that the degassing and follow up inspection and repair are necessary for the safe operation of the tanks and emissions are controlled initially using thermal oxidizer and later on using a carbon adsorption unit.

Next, we conducted further drive by odor observations with the front windows open along Murphy Drive. When we turned left to Gratiot Avenue, we observed a tanker truck at the unloading area. We continued our drive by odor observations with the front windows open, along Gratiot Avenue, Allen Road, Cuttle Road, and along NB Gratiot Avenue. We did not smell any crude oil odor during these observations.

WNW wind, 5 mph, 7-2-2019, 12:35 PM (Accuweather.com).

We came back to the truck unloading area and the truck was still there at 12:40 PM. We did not smell any crude oil odor at that location. I also did not see any visible emissions from the unloading area.

#### FACILITY OVERVIEW

Sunoco Pipeline, L.P.'s Marysville facility currently has five crude oil storage tanks (EUTANK 34, EUTANK41, EUTANK43, EUTANK44, EUTANK45, and EUTANK46) ranging from 4 million gallons to 11.5 million gallons in volume. EUTANK36 is also included in the permit, but this tank has been disassembled and is no longer at the facility (Letter to DEQ-AQD dated January 4, 2016). From the storage facility, the crude oil is transported to the Marathon Refinery in southwest Detroit, British Petroleum's refinery in Toledo, Ohio, and the Toledo Refining Company through pipeline. No crude oil transported out via tanker trucks.

EUTANK44, EUTANK45, and EUTANK46 are subject to the requirements of New Source Performance Standard (NSPS) Subpart Kb for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. EUTANK44, EUTANK45, and EUTANK46 were constructed in 1987, 1994, and 2007, respectively. EUTANK34, EUTANK41, and EUTANK43 were constructed in 1960, 1961, and 1967, respectively, and are, therefore, not subject to NSPS Subparts K, Ka, or Kb for Petroleum Liquid Storage Vessels (NSPS Subpart K applies to tanks constructed between June 11, 1973 and May 19, 1978, and NSPS Subpart Ka applies to tanks constructed between May 18, 1978, and July 23, 1984).

Other than the crude oil storage tanks, the facility has 5 electric pumps which are used to pump oil into and out of the storage tanks, a small propane heater in the maintenance garage, electric furnaces on the drop ceiling of the company's office, and a natural gas-fired 25 kW Generac emergency generator manufactured in 2010. The emergency generator is used to provide electricity for lighting and for the mechanical gate at the entrance to the facility in the event of a power outage.

## COMPLIANCE DETERMINATION

### Emergency Generator

The 25 KW, Natural gas fired, SI, Generac, emergency generator is Subject to 40 CFR 63, Subpart ZZZZ for Reciprocating Internal Combustion Engines, but the AQD has not accepted delegation for this subpart at area sources of hazardous air pollutant emissions. The facility is keeping hours of operation of this generator. This RICE is also subject to 40 CFR 60, Subpart JJJJ-New Source Performance Standards for Spark Ignition Internal Combustion Engines pursuant to 40 CFR 60.4230(a)(4)(iv).

The engine should be equipped with a non-resettable hour meter. Also, if this engine is a certified engine, permittee must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. If this engine was not purchased as certified, permit must:

- Keep a maintenance plan and records of conducted maintenance
- To the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions
- Conduct an initial performance test to demonstrate compliance with emission limits specified in Table 1 of 40 CFR 60, Subpart JJJJ.

Compliance for this emission unit was not verified during this inspection.

PTI NO. 178-98C

### EULACTUNIT

During the odor observations while on inspection, I observed a tanker truck at the unloading area. I did not observe any visible emissions.

The dragger tube testing of the crude oil showed that the H<sub>2</sub>S vapor phase concentration is 0 ppm. (See email from July 25, 2019). The records show that the unloading trucks are leak tested annually. The records show that the unloading was conducted during the allowed time. Permittee tested crude oil from the sites delivered on July 2, 2019. Facility submitted records of the sulfur content (%wt) testing for the sites. (analyses results attached). Permittee is keeping records of the truck inspections, daily crude oil deliveries and has posted the truck driver's checklist, as required in the permit.

**FGTANKFARM (EUTANK34, EUTANK 41, EUTANK 43, EUTANK44, EUTANK45, EUTANK46)**

SC 1.1 limits the crude oil throughput to 194,565,000 barrels per 12-month rolling period as determined at the end of each calendar month. The submitted records show that the total throughput is 50,738,819 barrels (2,131,030,398 gallons) for the January through December 2018 and 47,900,376 barrels (2,011,815,792 gallons) as of June 2019. This is in compliance with the throughput limit.

SC 1.2 and 1.4 require that the facility shall comply with all provisions of the Federal Standards of Performance for New Stationary Sources as specified in 40 CFR 60, Subpart A and Kb, as they apply to EUTANK44, EUTANK45, and EUTANK46 and equip and maintain the storage tanks with deck and seal configuration listed in the Table for SC 1.4. (see attached inspection records)

Scott told me that the all storage tanks are equipped with internal floating roofs, welded deck, either mechanical shoe or vapor mounted primary seal and rim-mounted secondary seal as required by the PTI. Based on the process description submitted with the PTI application, the storage tanks appear to be in compliance with the floating roof requirements for 40 CFR 60, Subpart Kb as required in SC 1.2 and 1.4. (See attached inspection records)

SC 1.3 requires that EUTANK34, EUTANK36 (currently removed from site), EUTANK41, and EUTANK43 operated in compliance with R336.1604. Based on the information gathered during the inspection and the process description, these storage tanks appear to be equipped with internal floating roofs and proper seals. From the information available the tanks appear to be in compliance with Rule 604 requirements. (See attached inspection records)

SC 1.4 requires that the facility shall perform inspections and monitor operating information for EUTANK44, EUTANK45 and, EUTANK46 in accordance with the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subparts A and Kb. The facility conducts the required inspections monthly on each of the six active storage tanks including EUTANK34, EUTANK41 and EUTANK43. PTI #178-98B only requires such inspections (visual inspections of the internal floating roof, the primary seal, or the secondary seal) be conducted on the three tanks subject to NSPS Subpart Kb (EUTANK44, EUTANK45, and EUTANK46) every 12 months after the initial fill. I collected copies of the records of the inspection records for AQD file. (See attached inspection records)

**Facility performs**

- per shift three drive-by observations looking for leaks,
- weekly and monthly walk by tanks inspections looking for leaks,
- quarterly overfill protection alarm inspections, (high alarm, high-high alarm-shut down filling),
- annual seal inspections.

He told me that the next degassing and seal repair inspection (pursuant to API 653) would be in February 2026 for Tank #46.

According to 40 CFR 60.113b(a)(2), the storage tanks equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the internal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill. The facility appears to be in compliance with this requirement based on the records submitted (VOC Tank Inspection Form).

If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the facility shall repair the items or empty and remove the storage vessel from service within 45 days. Most recent inspections were done on December 18, 2018. The report for each tank indicates "No" for the presence of liquid on the roof.

According to 40 CFR 60.113b(a)(4), the permittee shall visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner

or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL.

40 CFR 60.113b(a)(4) further requires that the above inspections shall be conducted every 10-year intervals in the case of storage tanks conducting the annual visual inspection as specified in 40 CFR 60.113b(a)(2).

Inspection	Tank 34	Tank 41	Tank 43	Tank 44	Tank 45	Tank 46
API 653	May 2017	April 2018	Feb. 2015	Sept. 2007	July 2014	June 2007 (installed in 2007)
Seal Gap (NSPS)	Dec. 2017	Oct. 2018	Feb. 2015	Nov. 2014	Aug 2014	Oct. 2017

No tanks are scheduled to be taken out of service for inspection in 2019.

Mr. Jared Everitt, Energy Transfer employee, indicated (via email on August 5, 2019) that 60.113b(4) does not require the tanks to be emptied and degassed to perform the 10-year seal inspections. If a tank is emptied and degassed for a 20-year API 653 inspection or for any other reason, the seal inspection is performed prior to returning the tank to service. However, for Tank 44 and Tank 46 (both have steel floating roofs that can be walked on), the 10-year seal inspections were done while the tanks were in-service. Having these performed while the tanks were “in-service” also resulted in lower emissions since tank cleaning was avoided.

SC 1.6 requires that all required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available to by the 15<sup>th</sup> day of the calendar month for the previous calendar month. The facility appears to be in compliance with this requirement.

SC 1.7 requires that the facility shall keep records of the throughput for each tank in FGTANKFARM for each calendar month and 12-moth rolling time period as determined at the end of each calendar month. The records show that the facility is keeping monthly and 12-month throughput records for each tank and total throughput. (see attached records)

SC 1.8 requires that facility keep records of inspections and operating information for EUTANK4, EUTANK45 and EUTANK46 in accordance with 40 CFR 60, Subparts A and Kb. The facility appears to be keeping the necessary records. Facility started keeping records of the VP of the liquid stored in each month or storage period with the throughput data.

FGFACILITY

SC 2.1a limits Volatile Organic Compound (VOC) emissions from FGFACILITY to less than 90 tons per year (TPY) based on a 12-month rolling time period. The submitted records show that the 2018 Jan-Dec. VOC emissions were 20.65 Tons. The facility is in compliance with the VOC emission limit.

SC 2.1b limits each (single) Hazardous Air Pollutant (HAP) emissions to less the 9 TPY based on a 12-month rolling time period. The 2018 records show that the largest single HAP (n-Hexane) was 0.310 TPY.

SC 2.1c limits Total (aggregate) HAP emissions to less than 22.5 TPY based on a 12-month rolling time period. The 2018 records show that the total HAP emissions were 0.804 TPY. The facility calculated VOC and HAP emissions using TANKS 4.0.9d program.

The reported HAP emissions for 2017, was much higher than what was reported for 2018. When inquired about the discrepancy, Mr. Everitt explained that for 2017, the permittee discovered that liquid volume percentages were being incorrectly used for the crude HAPs speciation profile, rather than the proper vapor weight fraction speciation based on those liquid volume percentages. This led to well overstated HAPs emissions, especially when the tank cleaning and roof landing emissions were calculated that year. The HAPs speciation profile was corrected and that’s why RY-2018 HAPs were lower and more accurate. The same will be the case moving forward.

SC 2.2 requires the facility to complete all required semi-annual calculations in a format acceptable to the AQD District Supervisor and made available by the last day of the calendar month following the end of the semi-annual time period. The facility appears to be in compliance with this requirement.

SC 2.3 requires that the facility shall keep, in a satisfactory manner, records of semi-annual VOC, individual HAP, and Total HAP emission rate calculations for FGFACILITY, as required by SC 2.1a, SC 2.1b and SC 2.1c. Also, that each semi-annual calculation (January 1-June 30 & July 1 - Dec. 31) shall include monthly calculations for each month in the semi-annual period. From the submitted records the facility appears to be in compliance with this requirement.

**Conclusion:** Based on this inspection and records review, Sunoco Pipeline, L.P.'s Marysville facility appears to be in compliance with the conditions of its PTI and other applicable air rules and regulations. The records cited are attached for review. During the odor observations for the complaint investigation, I did not observe any objectionable odor with intensity, duration and frequency to cause a Rule 901 violation. Follow up odor observations would be conducted after future complaints or while in the area. These complaints are considered "RESOLVED" at this time.

NAME Sebastiany Kallunkal

DATE 9/19/2019

SUPERVISOR

