DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B288159568

FACILITY: US Energy Distribution LLC - Novi Terminal		**SRN / ID:** B2881
LOCATION: 40600 Grand River Avenue, NOVI		**DISTRICT:** Warren
CITY: NOVI		**COUNTY:** OAKLAND
CONTACT: Terry Rosenfeldt , Terminal Operations Manager		**ACTIVITY DATE:** 07/29/2021
STAFF: Robert Elmouchi	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: On-site inspection.		
RESOLVED COMPLAINTS:		

On July 29, 2021, I conducted a scheduled inspection of US Energy Distribution LLC (SRN: B2881), located at 40600 Grand River Avenue, Novi, Michigan. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the administrative rules; and Air Use Permit to Install (PTI) 1140-92D.

This facility is a gasoline bulk terminal, which receives gasoline, diesel fuel, and Jet fuel via pipeline from Lima, Ohio, and ethanol via tanker trucks. This US Energy Distribution facility has seven large storage tanks, one underground storage tank for racing fuel (Turbo Blue), four loading racks, and a vapor combustion unit (VCU). Loading Racks #2 and #4 load gasoline only, Rack #3 loads gasoline and distillate fuel, and Rack #5 loads distillate fuel only.

This facility is located in Novi which is listed in Table 61 under Oakland County which is a county listed in Table 61a. These tables list metropolitan areas that are subject to Michigan Administrative Part 6 and Part 7 rules for gasoline loading and storage.

I arrived on-site and met with Mr. Terry Rosenfeldt, Terminal Operations Manager. During this inspection, I also met with Mr. David Rodriguez, Assistant Terminal Manager, and Mr. Joe Wiacek, Terminal Operator. Mr. Rosenfeldt provided records and we discussed permit conditions. Mr. Rodriguez and Mr. Wiacek escorted me throughout the facility and answered operational questions.

EULOADRACK

VOC emission records appear to demonstrate compliance with the I.1 12-month rolling total VOC emission limit of 19.3 tpy. The highest recent 12-month rolling time-period VOC emission rate was 10.85 tpy, which occurred in September 2020.

An emissions test was conducted on May 14, 2021. The test results indicate an emission rate of 3.264 mg VOC/L of organic compounds loaded. The permit limit is 10 mg VOC/L of organic compounds loaded.

I received records that appear to demonstrate compliance with the II.1 12-month rolling time-period limit of 300 million gallons of gasoline per year material limit. The highest recent 12-month rolling time-period throughput total was 88,174,561 gallons, which occurred in June 2021. This annual throughput is approximately 29% of the permitted gasoline throughput limit.

I observed that the Vapor Destruction Unit (VDU) control device was operating. The release of vapors to the VDU is regulated by a control valve. A Magnehelic pressure differential gauge is attached to one of the regulator's pressure lines. I observed that a previously inoperable Magnehelic gauge had been replaced and appeared to be operating properly. Per this inspection,

the violation of R 336.1910, which was cited in the Violation Notice dated September 22, 2020, appears to have been resolved.

US Energy Distribution LLC provided records of gasoline tank truck pressure/vacuum test results, which appear to demonstrate compliance with special condition VI.7. I observed the loading rack and safety interlock devices. We discussed the loading procedures and how a truck with expired certification testing is locked out by US Energy Distribution's computer tracking system. The computer control also has a safety bypass prevention feature that locks out the driver associated with an expired trailer certification to prevent the driver from bypassing US Energy Distribution's safety system by entering a fake trailer number.

On August 3, 2021, Mr. Rosenfeldt and I held a telephone meeting to answer Mr. Rosenfeldt's questions about EULOADRACK VI.6. We also discussed US Energy Distribution's compliance with VI.4 and VI.7.c. Both special conditions require compliance with 40 CFR 60.505(j). We discussed the redundancy of VI.4 and VI.7.c, and how US Energy Distribution exceeds the CFR's 1-week notification to the vehicle owner/operator because US Energy Distribution provides immediate notification at the terminal. Per the information provided and my onsite inspection, it appears that US Energy Distribution employees are trained, and adhere to, the applicable permit specified safety procedures and process/operational restrictions.

Per the September 10, 2020, on-site inspection, a violation notice citing the permittee's failure to submit a Preventative Maintenance/Malfunction Abatement Plan (PM/MAP) to the AQD District Supervisor no later than 60 days after issuance of the permit. The permit was issued on September 6, 2019. The PM/MAP was due on November 5, 2019. In response to the violation notice, Mr. Rosenfeldt worked with me to submit a PM/MAP that appears to meet the requirements of PTI No. 1140-92D, EULOADRACK, Special Condition III.4, and R 336.1911. Therefore, this violation has been resolved.

Currently, US Energy Distribution uses a Vapor Destruction Unit (VDU) to control emissions created by displacing the headspace in a tank truck during loading. PTI 1140-92D, issued on September 6, 2019, approved the installation of a vapor recovery unit (VRU), which is designed to condense and collect vapors displaced from tank truck filling. The advantage of the VRU is that the control device is expected to pay for itself in approximately 3-years, and thereafter generate a profit from selling the condensed fuel vapors.

Due to the COVID-19 pandemic, the construction of the VRU was delayed by the manufacturer, which resulted in interrupting the installation of the VRU for more than 18-months. Per my telephone conversation with Mr. Rosenfeldt on August 13, 2021, US Energy Distribution expects to resume the installation of the emission unit in October 2021 and have the VRU operational by November 2021. Per PTI 1140-92D general condition number 2, and R 336.1201(4), the permittee must submit a new permit to install application if they choose to continue with installing the VRU because the installation has been delayed for more than 18-months. On August 18, 2021, I emailed Mr. Terry Rosenfeldt to inform him of this requirement and I followed up with a cell phone call to discuss this compliance issue. In the email and telephone conversation, I emphasized that an approved PTI must be obtained by US Energy Distribution before bringing the VRU on-site. Mr. Rosenfeldt acknowledged this requirement. The installation delay does not constitute a violation because the emission unit has not arrived on site.

FGGASOLINETANKS

I observed the following tanks, which have an internal floating roof:

*** 101 – ethanol**

*** 102 – jet fuel**

*** 103 – trans mix**

*** 104 – regular gasoline**

*** 105 – regular gasoline**

*** 106 – premium gasoline**

*** 107 – diesel fuel.**

Tanks 101, 104, 105, and 106 have internal floating roofs. The permit does not require tank 101 to be equipped with an internal floating roof.

US Energy Distribution LLC appears to be in compliance with the single requirement of this flexible group, which is to have an internal floating roof in EUTANK104, EUTANK105, and EUTANK106.

BUTANE BLENDING

Butane

CAS: 106-97-8

ITSL (µg/m3): 23800

IRSL: none

Per my inspection of September 20, 2020, US Energy Distribution added butane fuel blending to its FGGASOLINETANKS tank farm. Butane blending occurs from September to April to meet gasoline Reid vapor pressure specifications during cooler months. A portable butane tank with connecting pipes was added to the tank farm to blend up to 5% butane into gasoline. The pipes are connected to EUTANK04 and EUTANK05. EUTANK04 and EUTANK05 do not have emission limits. Per PTI 1140-92D, they are only required to have an internal floating roof.

Butane is dissolved in the gasoline by recirculating it through a closed-loop system that injects butane at the bottom of the tank. The addition of butane does not increase the loading rack throughput. My R 336.1290 applicability determination is based upon a maximum increase of 5% controlled emissions.

The PTI 1140-92D Evaluation Document reviewed Truck Loading losses. Truck loading losses are from drips and vapor seal leaks. The Evaluation Document estimates annual Truck Loading losses at 6.78 tons per year, which averages 1,130 pounds per month. With a maximum 5% contribution from the fuel blending process, butane emissions average 56.5 pounds per month, from September through April.

The PTI 1140-92D Evaluation Document estimates VRU/VDU annual VOC emissions at 12.52 tons/year, which averages 2,080 pounds per month. With a maximum of 5% contribution from the fuel blending process, controlled butane emissions average 104 pounds per month, from September through April. (NOTE: The VDU is installed and appears to be properly maintained. VRU installation has been delayed due to the COVID-19 pandemic. Once installed, the VRU will be the primary control device and the VDU shall be kept in reserve for VRU maintenance or repair.)

Therefore, the potential increase of average monthly truck loading losses and VDU emissions from butane blending is approximately 160.5 pounds per month. R 336.1290(2)(a)(i) exempts any emission unit that emits only noncarcinogenic volatile organic compounds if the total controlled emissions of air contaminants are not more than 500 pounds per month. The estimated butane blending potential to emit is one-third of the R 336.1290(2)(a)(i) limit of 500 pounds. Therefore, the butane blending process appears to be exempt from the permitting requirements of R 336.1201.

Regardless of my determination, on August 30, 2021, Mr. Rosenfeld stated via email that their environmental consultant will be submitting a PTI application to address the 18-month VRU installation delay, mentioned above, and that the butane fuel blending process will be included in the application. Therefore, a second applicability determination will be performed by the AQD permit section.

CONCLUSION

It appears US Energy Distribution LLC is in compliance with the evaluated conditions of PTI 1140-92D.

NAME Robert Ulmanchi DATE 8/30/2021 SUPERVISOR Joyce