

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

B288164788

FACILITY: US Energy Distribution LLC - Novi Terminal		SRN / ID: B2881
LOCATION: 40600 Grand River Avenue, NOVI		DISTRICT: Warren
CITY: NOVI		COUNTY: OAKLAND
CONTACT: David Rodriguez , Assistant Terminal Manager		ACTIVITY DATE: 08/15/2022
STAFF: Noshin Khan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: scheduled announced inspection		
RESOLVED COMPLAINTS:		

On Monday, August 15, 2022, I (Noshin Khan, EGLE-Air Quality Division) performed a scheduled, announced inspection of US Energy Distribution, located at 40600 Grand River Avenue, Novi, Michigan 48375. Robert Elmouchi (EGLE-AQD) joined me for the inspection. The purpose of the inspection was to determine the facility's compliance with the 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 administrative rules, and the conditions of Permit to Install (PTI) No. 1140-92E.

Bob and I arrived at the facility around 9AM, and met with Terry Rosenfeldt, Terminal Operations Manager, in his office. We also met with David Rodriguez, Assistant Terminal Manager. Bob and I shared our credentials and then discussed the facility's current operations. The facility is a gasoline bulk terminal for ethanol, gasoline, diesel fuel, and Jet A fuel. There are 7 above-ground storage tanks and 2 underground storage tanks to hold fuels, and 4 loading racks.

The facility currently operates a vapor combustion unit (VCU), also known as a vapor destruction unit (VDU). The facility plans to install a vapor recovery unit (VRU), which will become the primary control device. The VRU will recover product through absorption in activated carbon reactors and recycle captured petroleum back to storage tanks. During the pre-inspection meeting, Bob reminded Terry that the facility must install the VRU within 18 months of issuance of the current permit (which was issued in December 2021), and that a test plan must be submitted to the AQD 30 days prior to testing to verify VOC emission rates from the VRU.

David took us outside for a site walkthrough. At the loading racks, he explained how each station requires the driver to check in before the loading process can begin. A unique driver number, pin, and trailer ID number are entered into the computer, which automatically checks information on the truck's compliance and will lock out the driver if the truck's certification testing is expired or other requirements are not met. By locking out the driver, the safety system prevents the driver associated with the expired truck to bypass the system by entering a fake trailer number.

David showed us the line used to extract vapors from the trucks. David noted that this tubing is checked and replaced, if necessary, before each winter. Vapors are conveyed to the VCU. The racks utilize submerged fill pipe for loading onto trailers, and a probe inside each truck prevents overfilling.

Rack 2 loads gasoline, diesel, trans mix (a mix of gasoline and diesel), and jet fuel. Rack 3 loads gasoline, diesel, and jet fuel. Rack 4 loads gasoline and diesel. Rack 5 loads gasoline and diesel. In the area adjacent to the loading racks, we observed some smaller storage tanks which David explained contain additives which are conveyed into the racks and loaded along with fuel as

specified by company formulations. According to David, the largest of these additive tanks has a maximum capacity of 6000 gallons. David provided SDS's for these additives and most are petroleum-based. The additive tanks appear to be exempt from PTI requirements per R 284(2)(b).

Next, David took us to the VCU and we observed the magnehelic pressure differential gauge on the unit. The gauge appeared to be functioning properly. The release of vapors to the VCU is regulated by a control valve; this opens when the pressure in the unit reaches 5 PSI and vapors are burned off. David also noted that daily checks are performed on the VCU including checks that the flame is on and that the pressure gauge is functioning properly. I did not observe any visual emissions from the VCU during the inspection.

A few of the large storage tanks were visible from this area. David confirmed the following details for the 7 storage tanks:

- 101 – holds ethanol; has an internal floating roof
- 102 – holds jet A fuel; no internal floating roof
- 103 – holds trans mix; no internal floating roof
- 104 – holds regular gasoline; has an internal floating roof
- 105 – holds regular gasoline; has an internal floating roof
- 106 – holds premium gasoline; has an internal floating roof
- 107 – holds diesel fuel; no internal floating roof

The facility performs butane blending into regular gasoline (tanks 104 and 105) from approximately September to early May. The blend is up to 5% butane and does not increase the throughput of the loading rack. Butane is injected into tanks 104 and 105 and is blended by continuous mixers in the tanks. This process was included in the application for the current permit, and permit evaluation documents account for increased RVP with butane blending. The PTI 1140-92E Evaluation Document estimates 16.88 tpy of VOC emissions (from gasoline only) from truck loading losses and VRU/VDU emissions, averaging 2813 lb/month. With a maximum of 5% contribution from butane blending, the consequent VOC emissions average 141 lb/month. Since this value is less than 500 lb/month, butane blending appears to be exempt from PTI requirements per R 290(2)(a)(i).

Per PTI 1140-92E, the facility is subject to Michigan Administrative Part 6 and 7 rules for gasoline loading and storage.

EU-LOADRACK S.C. III.1 requires compliance with Rule 706. Rule 706 requires that delivery vessels loading any organic compound that has a true vapor pressure of more than 1.5 psia at a facility that has a throughput of 5,000,000 or more gallons per year is controlled by a vapor recovery system and vapor-tight collection line so that emissions to the atmosphere do not exceed 0.7 lb of organic vapor per 1,000 gallons of organic compounds loaded. I evaluated compliance with this VOC limit using data from a stack test performed on May 14, 2021 on the facility's VCU. A total of 151,982 gallons of fuels were loaded and a total emission of 2.48 lb VOC was observed. This results in a value of 0.016 lb VOC/1000 gallons of fuels loaded, which is below the limit specified. Rule 706 also requires that delivery vessels are filled by a submerged fill pipe, which David explained is the case for the loading racks.

During the inspection, I did not observe whether written operational procedures were posted at each loading rack. I asked David via email if written procedures were posted and he said they were

not, since the loading process will not begin unless the hose is pressed firmly and locked into place as a vapor-tight connection. He said that a driver needs to enter a PIN in order for them to receive a green light which would then allow them to load fuel. This PIN can only be pressed in if the hose for the interlocking system is connected properly. Written procedures for operation of control measures are required by EU-LOADRACK S.C. III.1.c. and I'm issuing a verbal warning to the facility to have this corrected, and will follow up to confirm action was taken.

EU-LOADRACK S.C. III.2 requires compliance with Rule 627. Rule 627 requires that delivery vessels are pressure/vacuum tested annually. David explained that companies send US Energy Distribution vapor testing and certification information for loading trucks and provided an example tank-truck inspection report. The report indicates that trucks are equipped with pressure relief devices and vapor balance systems, indicating compliance with S.C. III.2.c. Electronic data is updated and if any certifications are expired for a truck, it will be locked out from the fuel loading process. This procedure indicates that the facility is in compliance with Rule 627, as only trucks with up-to-date testing can load fuels.

I followed up with David regarding EU-LOADRACK S.C. III.2.a., which says that there shall be no gas detector reading (from a combustible gas detector according to Rule 2005 procedure) greater than or equal to the lower explosive limit (LEL) at a distance of 1 inch from the location of a potential leak in the vapor collection system. David said that they perform daily rack walks to inspect vapor collection hoses for cracks, breaks, or fuel odor, and that repairs are made based on those inspections. He said that a combustible gas detector is used when work (such as repairs) is being done at the rack to ensure that readings are well below the LEL. He said the facility does not keep records of these readings.

Per EU-LOADRACK Special Condition (S.C.) I.1, the facility has a VOC emission limit of 17.4 tpy based on a 12-month rolling time period and calculated each calendar month. The facility's emissions calculations indicate that the highest annual rate of VOC emissions was 2.30 tpy in August 2022. From the facility's throughput records, the highest 12-month rolling throughput value for all fuels combined was 181,482,047 gallons in August 2022. With a value of 1.95 mg VOC emitted per liter of fuels loaded (according to the May 2021 stack test):

$1.95 \text{ mg/L} * \text{g}/1000 \text{ mg} * \text{lb}/454 \text{ g} * \text{ton}/2000 \text{ lb} * 3.785 \text{ L}/\text{gallon} * 181,482,047 \text{ gallons} = 1.48 \text{ tons VOC}$

Both the facility's emissions calculations and the above calculation using the stack test emission rate and facility throughput indicate that the US Energy Distribution is below its VOC emission limit and is in compliance with EU-LOADRACK S.C. I.1.

Per EU-LOADRACK S.C. I.2, the VCU and VRU have a VOC emission limit of 10 mg/L of organic compounds loaded. The last stack test for the VCU from May 2021 reports an observed VOC emission rate of 1.95 mg/L of all fuels loaded. This is below the permitted limit and the facility appears to be in compliance with this condition.

Per EU-LOADRACK II.1, the facility has a gasoline material limit of 250 million gallons per year based on a 12-month rolling value. The facility's material usage records indicate that from January 2021 to August 2022, the highest annual rate of gasoline throughput was 136.00 million gallons in August

2022. This is below the permitted limit and it appears that the facility is in compliance with this condition.

Per EU-LOADRACK II.2, the facility has a diesel material limit of 100 million gallons per year based on a 12-month rolling value. The facility's material usage records indicate that from January 2021 to August 2022, the highest annual rate of diesel throughput was 22.34 million gallons in October 2021. This is below the permitted limit and it appears that the facility is in compliance with this condition.

Per EU-LOADRACK II.3, the facility has an ethanol material limit of 80 million gallons per year based on a 12-month rolling value. The facility's material usage records indicate that from January 2021 to August 2022, the highest annual rate of ethanol throughput was 15.08 million gallons in August 2022. This is below the permitted limit and it appears that the facility is in compliance with this condition.

Per EU-LOADRACK II.4, the facility has a Jet A fuel material limit of 50 million gallons per year based on a 12-month rolling value. The facility's material usage records indicate that from January 2021 to August 2022, the highest annual rate of Jet A fuel throughput was 9.96 million gallons in September 2021. This is below the permitted limit and it appears that the facility is in compliance with this condition.

Per FG-GASOLINETANKS S.C. IV.1, the permittee shall not store gasoline in tanks 104, 105, or 106 unless internal floating roofs are installed, maintained, and operated in a satisfactory manner. During the facility inspection, David confirmed that tanks 104, 105, and 106 have internal roofs installed. He also noted that the facility is due for an in-service this year to check for leaks and malfunctions within the storage tanks, and that these in-services are scheduled on a regular basis. The facility appears to be in compliance with this condition.

Per EU-LOADRACK S.C. VI, the facility appears to be in compliance with recordkeeping requirements. The facility provided records for monthly VOC emissions and 12-month rolling emission rates (S.C. VI.2); they also provided throughput records for gasoline, diesel, ethanol, and jet A fuel that included 12-month rolling values (S.C. VI.3). As discussed above, the facility maintains a procedure for keeping tank truck certifications up to date, indicating compliance with S.C. VI.6(a) and VI.7. The facility does not yet operate a VRU, so S.C. VI.5 does not yet apply.

The facility is subject to 40 CFR Part 63 Subpart BBBB. The AQD hasn't accepted delegation to enforce this rule, so compliance with this rule was not evaluated.

Per EU-LOADRACK S.C. III.3, the facility is subject to 40 CFR Part 60 Subpart XX. The facility appears to operate its VCU in compliance with the specific conditions listed in the permit. This rule requires a 35 mg/L VOC limit. The stack test observed values of 1.95 mg/L of all fuels loaded and 3.26 mg/L of gasoline loaded indicate that the facility is meeting this criteria.

I am issuing a verbal warning to the facility for a lack of written procedures for operation of control measures as required by EU-LOADRACK S.C. III.1.c and Rule 706.

NAME *Noshin Khan*

DATE 10/03/2022

SUPERVISOR *K. Kelly*