

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

B907270302

FACILITY: MPLX Terminals LLC - North Muskegon Terminal		SRN / ID: B9072
LOCATION: 3005 HOLTON RD, N MUSKEGON		DISTRICT: Grand Rapids
CITY: N MUSKEGON		COUNTY: MUSKEGON
CONTACT: Shane Cappama , Terminal Manager		ACTIVITY DATE: 11/30/2023
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On site inspection to assess compliance with air quality rules and regulations.		
RESOLVED COMPLAINTS:		

Introduction

On Thursday, November 30, 2023, State of Michigan (SoM) Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an on-site inspection at the MPLX Terminals LLC facility located at 3005 Holton Rd. in Muskegon, Michigan, to assess compliance with permitted requirements as well as all other applicable air quality rules and regulation. MPLX Terminals LLC is a transfer station that houses multiple large, storage tanks for use of storing fuel such as ethanol and gasoline and transfers these fuels to trucks via a 5-lane terminal rack. During this inspection, a seal fit test was being conducted to test the seals of the floating roof storage tanks. This was a scheduled test and visit; however, the facility was not aware that a full inspection would be conducted during the observation of this test. The seal fit test results are not specified in this report. The facility has one approved Permit to Install (PTI): PTI No. 303-01B.

Upon arrival at the facility, SE observed the facility perimeter. There were no visible emissions observed at this time. There were subtle odors of gasoline and similar fuels. These odors were not severe enough to be considered a nuisance. There have been no odor complaints about this facility since 2015 when installation of new equipment resulted in temporary odors. There was one complaint of noise regarding the recently installed flare at the facility. This matter was closed without the issuance of a violation. There have been no further complaints regarding this facility. After the perimeter inspection was conducted, SE entered the facility and was greeted by Shane Cappama. After discussions of the purpose of the visit and safety considerations regarding the facility and testing being conducted, an on-site inspection was conducted.

PTI No. 303-01B

This permit is a modified PTI that was issued on May 3, 2022. It includes requirements for 11 emission units (EUs) and two flexible groups (FGs) as listed below:

- EURACKS
- EU20-8
- EU35-4
- EU40-11
- EU80-2
- EU80-3
- EU80-9
- EU80-10
- EUO-84-12
- EUO-84-13
- EUT-7

- FG-IFRTANKS
- FGFACILITY

EURACKS

This EU consists of a 5 lane terminal truck loading rack with a carbon adsorption vapor recovery unit (VRU) as the primary control device. Two portable vapor combustion units, or flares, (one “Zinc” unit and one “RANE” unit) are available as back up control devices. Use of these flares at this facility is not a standard operational procedure. It was discussed with facility staff that the VRU is the primary and preferred method of emissions control as it results in condensation of vapors that can be reclaimed as product which reduces emissions and increases product output. The use of flares is a permitted option for emissions control and is accounted for in emissions calculations discussed below. During the inspection it was discussed that the use of any flare is not for more than a few days at any time and that the last notable use of the flares was in the fall of 2022 during maintenance procedures when the VRU was not available.

This EU has five emission limits as outlined in the table below:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Recorded Max	Compliance (Y/N)
1. VOC	23 tpy	12-month rolling time period as determined at the end of each calendar month	EURACKS Fugitive emissions	15.47 tpy in October 2023	Yes
2. VOC	20 tpy	12-month rolling time period as determined at the end of each calendar month	EURACKS Emissions through the VRU and VCUs	0.07 tpy in October 2023	Yes
3. VOC	7 mg/liter of gasoline loaded	12-month rolling time period as determined at the end of each calendar month	EURACKS Emissions through the VRU and VCUs	1.02 mg/liter in October 2023	Yes
4. VOC	10 mg/liter of gasoline loaded	Monthly average	EURACKS Emissions through the VRU and VCUs	1.02 mg/liter	Yes
5. VOC	8 mg/liter of gasoline loaded	Monthly average	EURACKS Fugitive emissions	6.9 mg/liter	Yes

There is a sixth emission limit for this EU that limits emissions through the control devices so that the following equation is satisfied:

$$\text{VRU} * 0.109 + \text{RANE} * 0.151 + \text{Zink} * 0.0133 \leq 1.34$$

Compliance with all six of the above emission limits was determined through the review of records for November 2022 through October 2023 provided as required in the recordkeeping requirements section of this PTI. These records are discussed in more detail below. Compliance with the fifth limit above was determined through calculation of reported loading VOC fugitive emissions along with total gallons of reported fuel transfer.

This EU has one material limit, which states that throughput through this EU shall not exceed the following:

- 700,000,000 gallons of gasoline and ethanol per 12-month rolling time period.
- 150,000,000 gallons of distillate per 12-month rolling time period.

As with the emission limits, compliance with this material limit was determined through provided records. The following recorded maximums were observed during a review of these provided records:

- 454,670,691 gallons of gasoline and ethanol.
- 81,121,988 gallons of distillate.

This EU has three operational restrictions. The first requires that the facility shall install and maintain appropriate vapor-tight collection lines. These lines were observed and appeared to be in good condition during the inspection.

The second operational restriction requires that the requirements of Rules 609, 627, and 706 be adhered to during operation of the facility. These requirements pertain largely to maintaining proper equipment to handle pressurized gasoline loading as well as limiting pressures produced so as to ensure that leaks of fuel or vapors do not occur during loading. During the inspection it was observed that all loading equipment appeared to be in good order. There were no visible leaks of liquid fuels. Though visual inspection is imprecise for determining absence of vapor leaks, limited odors, and the observation of appropriate equipment in good condition appeared to confirm compliance with the requirements at the time of inspections.

The third operational restriction outlines requirements for an appropriate Malfunction Abatement Plan (MAP) that must be maintained and adhered to by the facility. The facility has historically provided a copy of their proposed MAP to the AQD. This MAP remains relevant and adequate at this time. The facility could be seen to be adhering to all relevant components of the MAP during the inspection.

This facility has one equipment parameter that states that no delivery vessel may be filled unless the vapor balance system is installed, maintained, and operated in accordance with the following parameters:

- The permittee shall connect the vapor-tight collection line to the delivery vessel before any organic compound is transferred.
- The permittee shall close the vapor-tight collection line upon disconnection so as to prevent release of organic vapor.
- The permittee shall close the hatch and other openings on the delivery vessel and make certain they are vapor-tight to prevent emission of displaced gasoline vapor during transfer operations, except under emergency conditions.
- The permittee shall equip the liquid transfer line with a device or shall implement a procedure to prevent liquid drainage from the line when it is disconnected and not in use.

During the inspection it was observed that all components of the vapor balance system were installed and maintained in good working condition. During the visit, multiple trucks were observed being loaded in the rack system. No issues were observed during these fillings.

This EU has two testing requirements. The first is that, at least once per year, a Relative Accuracy Test Audit (RATA) on the VOC continuous emissions monitor on the VRU must be conducted. The most recent RATA was conducted on November 30, 2022. The results found that the unit was in compliance with the 10% allowable limit. The next testing date was discussed and the facility had conducted the test on October 17, 2023. Results were provided to the AQD on December 5, 2023 and no issues or deviations were observed.

The second testing requirement states that stack testing to verify VOC emission rates must be conducted once every five years. The most recent stack test was conducted on November 30, 2022. This test confirmed compliance with the 10mg/liter limit of the vapor recovery unit with a measured rate of 1.02mg/liter. This also demonstrates compliance with the applicable emission limit outlined in the table above. Results of this stack test were provided to the AQD as required.

This EU has seven recordkeeping requirements. The first requires that records and calculations be maintained in an acceptable format and be available no later than the 15th of every calendar month. The provision of records upon request demonstrates compliance with this requirement.

The second recordkeeping requirement requires that records be maintained in accordance with New Source Performance Standard (NSPS) 40 CFR Part 60 Subparts A and XX. Compliance with these rules is demonstrated through the proper installation and maintenance of transfer and vapor control equipment that is outlined and discussed above, meaning that the facility appeared to be compliant with these requirements at the time of the inspection. Additionally, records required are further outlined in the following further recordkeeping requirements that are discussed below.

The third requirement states that throughput records for each petroleum product shall be maintained monthly and for each 12-month rolling period. The records were provided and used to determine compliance with throughput limits as discussed above.

The fourth requirement outlines that the following information shall be maintained on a monthly and 12-month rolling basis:

- Controlled VOC emission calculations based on the VRU continuous VOC monitoring data mg/L equivalency from the most recent VRU performance test.
- Fugitive VOC emission calculations using an emission factor based on current gasoline distribution facilities loading rack collection system emission factors.
- Miscellaneous VOC emission calculations from pumps, valves, and fittings based on current gasoline distribution facilities emission factors.
- The hours of operation of each portable VCU.
- The amount of gasoline loaded while each portable VCU was operating.
- The controlled VOC emission rate from each portable VCU.
- Demonstration that the equation in Special Condition I.6 is satisfied for the current 12-month rolling time period.

These records were provided by the facility and used to assess compliance with the emission limits outlined in the table above. A copy of the submitted data has been included with this report.

The fifth recordkeeping requirement outlines the following requirements:

- Compliance with the appropriate leak test for each delivery vessel.
- Part replacements, repairs and maintenance for the loading rack control device as specified in the malfunction abatement plan (MAP).
- All loading rack control device malfunctions or failures.

Records were provided and are included with this report.

The sixth recordkeeping requirement is a reiteration of the second requirement, likely retained as an oversight during the permit modification process. This was discussed with the facility, and it was agreed that it isn't harmful to leave the repeated requirement until such a time as it is administratively convenient to eliminate the redundancy.

The seventh recordkeeping requirement requires that a continuous monitor be installed to measure VOC concentration from the VRU exhaust. This monitor was observed during the inspection and appeared to be in good working order. The data collected by this device is included as needed with the previously required VOC data to calculate compliance with the emission limits discussed above.

This EU has three associated stacks: SV-VRU, SV-RANE, and SV-ZINK. All stacks were installed as required and appeared to meet required dimensions.

As the facility is subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart BBBBBB, this facility and this EU are required to comply with the requirements of the NESHAP. At this time, the AQD is not delegated by the US EPA for enforcement of this NESHAP and so further analysis will not be discussed in this report.

FG-IFRTANKS

This FG consists of all storage tanks at the facility with internal floating roofs.

This FG has one emission limit, which restricts VOC emissions to no more than 33.1 tpy. During a review of provided records, as are further discussed below, it was determined that the highest annual emission rate at the facility was 17.79 tpy, which is compliant with the limit.

This FG has one material limit, which restricts all throughput to no more than 700,000,000 gallons per 12-month rolling period. During a review of provided records, as are further discussed below, it was determined that the highest annual throughput at the facility was 548,611,745 gallons, which is compliant with the limit.

This FG has two operational restrictions. The first outlines the specific rules which each EU encompassed by this FG must comply with in order to store gasoline. These rules include Rules 604, 607, 624, and 704. During the inspection, all tanks appeared to be in proper compliance with the applicable rules in order to remain in use.

The second operational restriction requires that the tanks be compliant with NSPS 40 CFR Part 60 Subparts A and Kb. Compliance with these subparts is largely written into the PTI and so compliance with the requirements of the PTI demonstrates compliance with the NSPS requirements. During the inspection the tanks appeared to be in appropriate compliance.

This FG has one design parameter, which outlines which tanks are required to have which deck and seal configurations. During the inspection, all tanks were compliant with the requirements as listed.

This FG has four recordkeeping requirements. The first requires that records and calculations be maintained in an acceptable format and be available no later than the 15th of every calendar month. The provision of records upon request demonstrates compliance with this requirement.

The second recordkeeping requirement requires that inspection records be maintained to demonstrate compliance with all NSPS requirements. These records were maintained and reviewed on site. All records observed appeared to be complete and within compliance of the requirements of the NSPSs.

The third recordkeeping requirement requires that throughput of each petroleum product be maintained on a monthly and 12-month rolling basis. Records were provided and used to determine compliance with the throughput limits outlined and discussed above. The records are included with this report.

The fourth recordkeeping requires that VOC emission be maintained on a monthly and 12-month rolling basis. Records were provided as required and used to determine compliance with the emission limit as discussed above. These records are included with this report.

FG FACILITY

This FG consists of all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

This FG includes two emissions limits as follows:

Pollutant	Limit	Time Period / Operating Scenario	Highest Recorded	Compliance (Y/N)
1. Aggregate HAPs	6 tpy	12-month rolling time period as determined at the end of each calendar month	1.765 tpy	Yes
2. VOC	85.5 tpy	12-month rolling time period as determined at the end of each calendar month	35.09 tpy	Yes

The compliance determinations above are based on analysis of the provided records discussed below.

This FG has two recordkeeping requirements. The first requires that records and calculations be maintained in an acceptable format and be available no later than the 15th of every calendar month. The provision of records upon request demonstrates compliance with this requirement.

The second recordkeeping requirement states that the facility shall maintain monthly and 12-month rolling emissions data for facility wide VOC emissions and aggregate HAP emissions. The

records were provided as required and used to make the above compliance determinations with emission limits.

NSPS / NESHAP

As is discussed above, this permitted equipment is subject to the following NSPS and NESHAP regulations:

- NSPS 40 CFR Part 60 Subpart A
- NSPS 40 CFR Part 60 Subpart Kb
- NSPS 40 CFR Part 60 Subpart XX
- NESHAP 40 CFR Part 63 Subpart BBBB

As discussed above, the facility was inspected and appeared to be compliant 40 CFR Part 60 Subparts A, Kb, and XX. As was discussed, the AQD does not have delegation for regulation of NESHAP 40 CFR Part 63 Subpart BBBB.

Exempt Equipment

This facility has one diesel-fired, fire pump engine. This unit was installed in 2015. This unit is subject to both NSPS 40 CFR Part 60 Subpart IIII and National Emission Standard for Hazardous Air Pollutants (NESHAP) 40 CFR Part 63 Subpart ZZZZ. Documentation was provided for the unit that demonstrated it is an engine that is certified compliant with EPA standards. This certification demonstrates compliance with NSPS 40 CFR Part 60 Subpart IIII. This unit is also compliant with NESHAP 40 CFR Part 63 Subpart ZZZZ through demonstration of compliance with NSPS 40 CFR Part 60 Subpart IIII.

This facility has a butane system that offloads butane and then injects the butane into the system. This was installed in 2015. The system includes two 60,000gal storage tanks. In 2015, an exemption determination was provided to the AQD by the facility outlining permitting exemption for this equipment through Rule 284(2)(j). This exemption application appears to be applicable and so the equipment appears to be exempt from permitting requirements.

Reports

Through various permitting, NSPS, and NESHAP requirements this facility is required to submit various reports including NESHAP 40 CFR Part 60 Subpart BBBB reporting, MEARS reporting, RATA reporting, and Stack Test reports. Since the last inspection the facility has not missed submission of any of the above, required reports on the required due dates. Additionally, no violations or deviations have been identified through these reports. A breakdown of these reports is included with this report in the form of a Full Compliance Evaluation.

Conclusion

At the conclusion of this inspection the facility appeared to be compliant with all requirements of PTI No. 303-01B and all other applicable air quality rules and regulations.

NAME Scott Evans

DATE 12/14/2023

SUPERVISOR HH