

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

M236331279

|                                        |                               |                           |
|----------------------------------------|-------------------------------|---------------------------|
| FACILITY: Marathon Pipe Line LLC       |                               | SRN / ID: M2363           |
| LOCATION: 24400 ALLEN RD, WOODHAVEN    |                               | DISTRICT: Detroit         |
| CITY: WOODHAVEN                        |                               | COUNTY: WAYNE             |
| CONTACT: Todd Scarborough              |                               | ACTIVITY DATE: 09/18/2015 |
| STAFF: C. Nazaret Sandoval             | COMPLIANCE STATUS: Compliance |                           |
| SUBJECT: FY- 2015 Scheduled Inspection |                               | SOURCE CLASS: MAJOR       |
| RESOLVED COMPLAINTS:                   |                               |                           |

**SOURCE:** SRN M2363 - Marathon Pipe Line Co (MPL)  
**PURPOSE OF INSPECTION:** FY-2015 Scheduled Inspection  
**INSPECTION DATE:** 9/18/2015  
**INSPECTOR:** Nazaret Sandoval  
**FACILITY PERSONNEL:** Rebecca Church –NEA Operation Supervisor  
 Raymond W. Price – Area Manager  
 Todd Scarborough – Sr. HES Air Coordinator

**FACILITY CONTACT PHONE:** Raymond Price 734 362-6224  
**ROP CONTACT EMAIL/CELL:** Todd Scarborough - Cell No. 419 429-9511

**FACILITY DESCRIPTION**

Marathon Pipe Line, LLC, LPG Transfer and Storage facility (MPL) is located at 24400 Allen Road in Woodhaven, Michigan between West Road and Van Horn Road. The area is predominantly industrial-commercial and the nearest residence is approximately 300 yards south of the facility’s property line.

Liquefied petroleum gas (LPG) is received primarily by pipeline and stored in one of eight dedicated underground storage caverns (solution mined salt domes). Stored LPG can be transferred offsite via pipeline or tanker trucks. There are two loading lanes for transfer of the LPG (primarily propane) to tanker trucks, one station for trans-mix loading into trucks, one LPG unloading station, two brine storage tanks, two brine ponds, and five horizontal LPG above ground storage tanks for temporary storage of trans-mix due to multiple products being transferred through the pipeline. The tanker trucks sizes vary from 9,000 gallons to 16,000 gallons. In an average year, the facility receives 40 propane loading trucks per day, with the bulk of them during the winter and fall months.

Ancillary equipment includes an ethyl-mercaptan injection system for “stenching” or odorizing propane loaded on trucks and a dryer to remove moisture from the propane prior to loading.

During periods of LPG transfer to pipelines or tanker trucks, LPG is displaced from the underground caverns by pumping brine stored in on-site ponds into the caverns. During periods of LPG receipt via pipeline, LPG is discharged into the underground caverns and brine is displaced and temporarily stored in two vertical open-top storage tanks (Tanks 34-T4 and 34-T6) prior to the brine being returned to the brine ponds. The brine tanks are used to capture and control hydrocarbons entrained in the brine or in the case of an unanticipated mechanical failure in the wellhead or piping system.

In addition, various relief valves within the facility are routed to the brine tanks to safely control overpressure situations. The brine tanks are equipped with glow coil igniters that float on the brine and serve as a continuous source of ignition should LPG be released in the tanks.

A continually operated gas-assisted stationary stack type flare system was installed at the facility and was put into service on the last quarter of 2012. The new flare includes a pilot flame and knockout drum located directly upstream of the flare stack. Most of the facility's relief devices are routed to the new flare along with several streams that were previously vented directly to the atmosphere such as the vapors that are released when a loading line is depressurized after being disconnected from a tanker truck. In the event the new flare system is unavailable due to maintenance, collected emissions will be routed to the brine tank glow coil ignition system, which will continue to be used to control emissions from the brine system.

### **COMPLIANCE / COMPLAINTS HISTORY**

There are no records of citizen complaints and /or violation notices issued by AQD since the last inspection conducted on 9/12/13.

In the previous inspections I discussed the deviation that had been reported by MPL in their Annual ROP Certification for year 2013. The deviations were related to ROP General Condition Nos. 38 to 41. There were compliance issues brought up by the USA EPA Region V during a Risk Management Program (RMP) inspection audit at the "Woodhaven Cavern Facility" (WCF) on March 2011 which resulted in a Notice of Intent (NOI) issued to MPL on January 30, 2013. Most of the program deficiencies found by the EPA and reported in the 2013 ROP deviation report had been addressed when I visited the facility in 2013, but they were still negotiating a settlement with the EPA. During this inspection I requested a follow-up. MPL indicated that they have finished work to close-out action items to ensure that the facility's RMP was in compliance with the regulations. In our meeting, MPL handed out a summary that shows their response to the NOI Plan and their negotiations with the EPA. According to the information provided in that summary, MPL's obligations under the Consent Agreement and Final Order (CAFO) appear to have been resolved on June 24, 2014.

### **MAERS REPORT EVALUATION**

MAERS report for emission year 2014 was timely submitted online on 2/9/2015 and the ROP certification was received on 2/18/2015. The report was audited by AQD. No errors were detected and no major changes with respect to last year's emissions were noted. The emission summary attached to MAERS reporting included VOC, NOx and CO emission calculations for each SCC and emission units ( Valves, flanges, pumps, relief valves, LPG Loading Rack, Flares). The total estimated tons of VOCs emitted during 2014 were 70 Tons. The VOC emissions are predominantly fugitive emissions from valves, representing 52% of the total VOC emissions. Relief Valves (uncontrolled and routed to Flares) 22.5%, and Flanges/connector representing 18.5 %. The rest of VOCs emission are from LPG Loading Rack, Pumps, and miscellaneous. NOX and CO are emitted in minor proportion from relief valves and from projects related flaring. The VOC reported emissions during 2014 (69.87 tpy) were very similar to those reported for year 2013 (67.20 tpy).

As indicated earlier in the "Facility Description" section of this report, the vapors that are released when a loading line is depressurized after being disconnected from a tanker truck are currently routed to the flare system. Therefore, since the installation of the flare system in 2012 we would have expected a slight reduction in the total VOCs emissions from that source and a minor increase of the NOx and CO emissions as a result of the combustion at the flare. After the site visit, I took a closer look at the MAERS reports from previous years and compared them with emission years 2013 and 2014. I noticed that the calculations of the

VOC emissions from the LPG Loading Rack were not modified to reflect this change in operations. Those emissions were still allocated as if the LPG loading tank trucks were still venting to the atmosphere (truck loading factor were used in the calculations of VOC emissions). However, I also recognize and understand that both changes would have been imperceptibles and insignificants because the percentage of VOC emissions from the LPG loading Racks accounts for 4% of the total VOCs emissions from the facility. NOx and CO emissions are a little over 1% of the total emissions. Therefore, we would not require a revision of the MAERS report at this time to reflect the cited changes in the routing of the venting from trucks loading.

In summary, the VOC emission from LPG Loading Rack (EU01- LPG- Loading) in tons per year for the year 2014 translates into emission rates equal to 0.1 lbs./ 1000 gallons of organic compounds loaded

For details, refer to the summary of the information as reported to the Michigan Air Emissions Reporting System (MAERS) in 2013 and 2014. Both submittals have been attached to the hard copy of this report.

### **OUTSTANDING VIOLATIONS OR CONSENT ORDERS**

There are none outstanding violations or consent orders for this facility.

### **INSPECTION NARRATIVE**

I arrived at the facility at approximately at 11:15 a.m. and I was greeted by the MPL personnel attending the meeting (names are listed at the beginning of this report).

Previous to our meeting I was asked to watch a video related to the alarm system to become familiar with the different types of alerts and sounds associated with the different levels of threats and hazards that can potentially occur at this facility.

After the introductions, I handed out the DEQ brochure titled "Right and Responsibilities" and I explained the purpose of the site visit. I indicated that the inspection is required to determine compliance with the Natural Resources and Environmental Protection Act (NEPA), Act 451, Part 55 and other applicable rules and federal regulations pursuant to Act 451 and the federal Clean Air Act.

We started the meeting with the evaluation of the emissions reported on MAERS for year 2014. I made some comments about the calculation procedures and the emissions factors. After an exchange of ideas I agreed with the methods. (Refer to MAERS section of this report for details about the post-visit evaluation). I asked about the system the facility uses to computerize the sales of product and totalize the gallons loaded to the trucks. I also asked how they convey that information to the MPL staff that is responsible for the emission calculations. Mr. Price showed me the computerized software that maintains the inventory of the daily gallons loading. "Team View" is a system that shares the operational data and makes them available to most of the MPL staff working at the NEA facilities. Staff at MPL access that information and use it for the emission calculations.

At the opening meeting I showed the flow diagram /plan view of the plant that we have on file for the facility and I asked if there have been any changes in the facility operations and/or any addition of equipment. MPL indicated that the equipment and the operations remained the same since my last inspection in 2013, but the office building where we were having the meeting was a new construction. As a result, since the building has more space, they installed a new natural gas fired emergency generator (35 KW). The existing 15 KW (20 HP) natural gas/propane fired emergency generator remains on the site and it is currently used during the

company events for grill-cooking.

I inquired about the other emergency generators and I was notified that there were other generators that had been replaced. We discussed the emergency generators and the state and federal applicable regulations. After an extensive discussion on this topic, I asked MPL to provide the engines specs sheets for all the existing emergency generators. The information was provided and it is attached to the hard copy of this report. A preliminary determination of the applicable regulations based on the construction date, rated power and type of fuel of the engines was suggested. However, I indicated I would further evaluate the information to make a more educated determination. At this point of the meeting, Todd Scarborough brought to my attention that some of the requirements cited in the current ROP for EU-Emergency RICE < 500 HP were not applicable. This is a diesel fired engine driven generator that provided power to one of the Fire Water Pumps during power outage. He also suggested that the applicability of NESHAP Subpart ZZZZ shall be revisited. I agreed with him and indicated that I have also noticed it when I was preparing for the inspection. We agreed on having a discussion about the revision of that section of the ROP sometime during the course of next year when the permit enters in the renewal cycle

We proceeded with the discussion of the ROP-M2363-2012 terms and conditions, (see next section of this report for the evaluation of compliance) and then we toured the facility. Mr. Price led the tour and described the process operations. During the walkthrough I asked Mr. Price to show me not only the main process and related emission units, but also to point out all the exempt equipment listed on the ROP staff report. All my questions were answered satisfactorily.

At the closing meeting I indicated that it appeared as if the facility was in compliance with all the ROP requirements. However, a final determination of compliance would be transmitted to the facility once the inspection report is completed.

I left the site at about 2:40 PM.

## **REGULATORY ANALYSIS AND EVALUATION OF COMPLIANCE**

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit volatile organic compounds exceeds 100 tons per year. The ROP re-issued on July 12, 2012 was revised to incorporate administrative amendments. The amendments included a change in ownership from Marathon Petroleum Company LP (MPC) to Woodhaven Cavern LLC, and a name change to Marathon Pipe Line, LLC (MPL). The current ROP was re-issued in January 15, 2015 under MI-ROP-M2363-2012a and the expiration date is July 12, 2017.

The facility is also an area source for Hazardous Air Pollutants because with the installations of the emergency generators it has the potential to emit less than 10 tons per year of a single HAP or less than 25 tons annually of any combination of HAPs.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451 or 40 CFR, Part 52.21 because the process equipment was constructed / installed prior to June 19, 1978, the promulgation date of the PSD regulations. However, modifications of this equipment may be subject to NSR permitting requirements.

MPL is subject to the emission limits of Michigan Air Pollution Control Rule 609 and the

operational criteria of Rule 605.

To evaluate if the emissions units identified in the ROP are in compliance with the applicable requirement, an evaluation of the terms and conditions of the MI-ROP-M2363-2012a are summarized below:

- EU01 –LPG –LOADING

#### I – EMISSION LIMITS: (IN COMPLIANCE)

The facility has to comply with the following limit:

0.7 pounds of VOCs per 1,000 gallons of organic compounds loaded (instantaneous).

The VOC emission from LPG Loading Rack in tons per year for the year 2014 translates into emission rates that equal to 0.1 lbs/ 1000 gallons of organic compounds loaded. That rate is less than the cited limit.

#### II – MATERIAL LIMITS

The permit does not include material limits

#### III - PROCESS/OPERATIONAL RESTRICTION(S) (IN COMPLIANCE)

There are written procedures for the operation of the design/equipment parameters listed in section IV below and they are posted in an accessible location near the loading device ( in the truck driver's authorization shed). In addition, truck drivers must be certified to load products to the trucks.

#### IV. DESIGN/EQUIPMENT PARAMETERS (IN COMPLIANCE)

All delivery vessel are equipped with a device to accomplish complete drainage before the loading device is disconnected, or a device to prevent liquid drainage from the loading device when not in use

All delivery vessel located at the facility are equipped, maintained or controlled with pressure vacuum relief valves that are vapor-tight and set to prevent the emission of displaced organic vapor during the loading of the delivery vessel, except under emergency conditions

All delivery vessel located at the facility are equipped, maintained or controlled with hatch openings that are kept closed and vapor-tight during the loading of the delivery vessel.

All the items on this section (specified in Rule 609 (3)) are included in a "check list". A software called "AIM" was used to store and maintain the inspection records. However, more recently, MPL switched to "SAP". This is a work-order management system repository of all critical records needed for permit compliance .The operators conduct weekly visual inspections and more detailed quarterly inspections required by the ROP. The quarterly inspections are conducted using electronic tablets and they are saved into SAP. A sample copy of the inspection conducted during the second quarter of 2014 (dated 6/27/2014) was printed out from SAP and it was handed out to me during the site visit. The document is attached to the hard copy of this report

#### V. TESTING / SAMPLING

N/A

## VI. MONITORING/RECORDKEEPING (IN COMPLIANCE)

The facility maintains records of the parameters involved in the organic vapor emission rate calculations for a period of five years. They use AQD approved methods (per Appendix 7 of the ROP) and backup calculations are provided when submitting MAERS reports.

On a quarterly basis, the permittee verifies all the requirements listed in Section IV of the ROP by completing the checklists mentioned above. The records are maintained in SAP. MPL reports any exceptions as deviations in the semi-annual and annual reports.

## VII. REPORTING (IN COMPLIANCE)

The Semi Annual and the Annual Certification reports for years 2014 and the first quarter of 2015 has been timely submitted with no reported deviations

- EU02-LPG-STORAGE

ROP Sections III, IV, V, VI and VII and are evaluated below. (ALL IN COMPLAINCE):

All openings to the caverns and storage vessels were designed to be capable of maintaining working pressures sufficient to prevent hydrocarbon loss to the atmosphere at all times, except under emergency conditions.

All openings to the storage caverns were equipped with seals on valves in a closed position at all times, except when in actual use.

End of line openings such as sample connections, high point vents and low point drains were secure with pipe plugs or caps

The facility conducts semiannual routine inspections to insure compliance with all Rule 605 requirements listed above. Those requirements are also included in the checklist cited in section IV for EU01 –LPG –LOADING and the records are maintained in MPL's SAP system.

The Semi Annual and the Annual Certification reports for years 2014 and the first quarter of 2015 has been timely submitted with no reported deviations

- ROP EU-EMERGENCY RICE < 500 HP and other Emergency Generators (TO BE DISCUSSED DURING THE ROP RENEWAL)

There have been various changes in the facility with respect to the existing and new installed emergency generators.

The generator cited in the ROP is a diesel fired engine driven generator that provided power to one of the Fire Water Pumps during power outage. According to the ROP this generator was installed on 11/4/2002. The conditions cited in the ROP for this emission unit were not evaluated during this inspection because:

- It appears as if most of the requirements from Subpart ZZZZ cited in the ROP are not

applicable to emergency generators.

- The facility removed this engine and in October 2013 installed two (2) identical emergency generators for this service. The new generators are "Cummins Fire Power, Model CFP9E-F60, Fire Pump Driver" with a 355 BHP(Refer to the attached Generators Summary Table).

A 70 KW emergency generator was installed on September 26, 2012 to supply power to the Flare System during power outages. The generator is a propane/natural gas-fired internal combustion engine with a heat input below 10 million BTU / hr. This equipment is exempt from the requirements to obtain a PTI per rule 285(g) but it is potentially subject to RICE and/or NSPS federal requirements. MPL submitted forms C-001 and M-001 to incorporate the changes to the ROP in accordance with Rule 215(3) ("off permit changes"). The notification of installation and evaluation of the federal applicable requirements (from Horizon Environmental Corporation) was received by AQD Detroit office on October 9, 2012. According to the applicability determination received the engine is EPA certified to meet the requirements of 40 CFR Part 60 Subpart JJJJ.

As indicated earlier, the 15 KW (20 HP), propane emergency generator located by the office building is no longer the backup power for the office building. A new 35 KW – EPA certified natural gas/propane fired emergency generator was installed.

#### Summary:

- The facility has two spark ignition (SI) natural gas/propane fired engines and two compression ignition (CI) diesel fired engines. All engines are rated at less than 500 HP.
- All the generators are exempt from the requirements of Rule R 336.1201 (1) 201 to obtain a permit to install because they all have internal combustion engines (ICE) that have less than 10 MBTU/hr maximum heat input. (see summary table for estimated heat input)
- The evaluation of the applicability of 40 CFR part 63, Subpart ZZZZ suggest that all engines fall under the same Emergency Stationary RICE category They are all NEW engines ( constructed after June 12, 2006) located in an Area Source for HAPs. Therefore, they all must meet the requirements of 40 CFR Part 63, Subpart ZZZZ by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines.

Emergency stationary RICE means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. All emergency stationary RICE must comply with the requirements specified in § 63.6640(f) in order to be considered emergency stationary RICE

#### **CONCLUSION**

Marathon Pipe Line Co. Woodhaven LPG Terminal appears to be in compliance with the ROP, MI-ROP-M2363-2012. Further evaluation of NSPS Subpart s IIII and JJJJ is required to determine compliance with those regulations. They will be discussed during the ROP renewal.

NAME Chandoral

DATE 9/24/15

SUPERVISOR -IK