

B2247

MANILA

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

B224754356

FACILITY: BUCKEYE TERMINALS, LLC-DETROIT TERMINAL		SRN / ID: B2247
LOCATION: 700 S DEACON ST, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT: Kimberly Trostel , Senior Air Compliance Specialist		ACTIVITY DATE: 06/25/2020
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2020 Scheduled Inspection		
RESOLVED COMPLAINTS:		

SOURCE: SRN B2247 - BUCKEYE TERMINALS, LLC – Detroit

FACILITY ADDRESS: 700 South Deacon Street, Detroit, Michigan 48217

INSPECTION DATE: 6/25/2020

INSPECTOR: Nazaret Sandoval (EGLE-AQD)

TERMINAL PERSONNEL PRESENT:

Michael Barrett - Terminal Specialist

Randle Green – Terminal Operator

MAIN COMPLIANCE CONTACT:

Kimberly Trostel, ktrostel@buckeye.com)

Phone: 419 993-8003; Mobile Phone: 419 549-0054

1.- SAFETY EQUIPMENT/SAFETY TRAINING/SECURITY

Hardhat, safety glasses, and steel-toed boots are required throughout the plant. Flame-resistant garments/flame-resistant clothing is not required for a site visit. Buckeye plant staff will provide coveralls to the AQD inspector if at the time of the visit they are performing certain jobs that require special protection. Buckeye recommends caution and would rather keep visitors away from working areas that could potentially be a threat.

2.- FACILITY DESCRIPTION

Buckeye Terminals, LLC is located in southwest Detroit, between the Fisher Freeway (Interstate 75) and the Rouge River. The nearest residential area is approximately 150 yards to the south, on the south side of W. Pleasant St.

The facility is a petroleum hydrocarbon fuels distribution terminal. The products are received by pipeline and stored in fixed-roof storage vessels with internal floating roofs. There are several above-ground storage tanks ranging in sizes from about 30,000 gallons to 4.6 million gallons designated for either gasoline or distillate service. Gasoline and diesel additives are stored in fixed roof tanks. The facility also has an 8,000-gallon gasoline underground tank for spills collection and a pressurized butane tank. Butane is used at the terminal as a blending element for gasoline to control the Reid Vapor Pressure (RVP).

Gasoline and distillate are bottom loaded into tank trucks for distribution to marketing stations. Gasoline additive is metered into gasoline during tank truck loading.

The terminal has a four-bay tank truck loading rack. Each rack is equipped with hoses and associated piping that hook up to a vapor control system. During loading operations, the vapors displaced from tank trucks are routed to a carbon adsorption/absorption vapor

recovery unit (VRU). The VRU controls the loading rack operations by reducing volatile organic compounds (VOC) emissions. There are two carbon adsorption units that alternate between adsorption and regeneration at 15- minute intervals. The system also employs a liquid knockout tank and pressure/relief vent upstream from the VRU.

Trucks are loaded only when the VRU is operating in a satisfactory manner. The VRU has an interlocking system that will not allow tankers to load product if the vapor line is not connected. Each loading bay is equipped with an overflow detector level control system that shuts off product flow to the tanker when the tanker capacity reaches a specified level. In addition, a valid tanker truck vapor tightness certification is required to load product at the terminal. Operators that fail to renew their vapor tightness certification for a given truck are not allowed to load product to that truck at the terminal.

The facility has an air stripper unit operation for the treatment of run-off wastewater containing dissolved concentrations of gasoline previous to the discharge to the sanitary sewer system.

The facility is capable of operating 24 hours per day, 365 days per year. The terminal operates with three people on site working in a 12 hrs. shift (8 hrs. on site and 4 hours on-call). The number of truck loadings per day at the facility varies with the market trends.

The original equipment listing submitted by Buckeye is on record. AQD requested an update of their equipment inventory to verify the following information: tank identification (IDs), description, capacities of the tanks, dates of installation/modifications, products and storage status (i.e. active, out of service, removed), list of exempt equipment and permitted emission units. Most of the information collected during the previous inspection on 6/20/2018 is current, with the following updates:

The list of exempt equipment has been revised to include three small fuel-additive tanks identified as tanks No. 22, 23, and 24 that were installed within the last five years and are exempt from the requirement to obtain a permit to install. The former fuel-additive tanks, No.13 and No.14 have been removed from the terminal. Also, tank No. 21 is permanently removed.

The facility diagram for Buckeye Detroit Terminal dated 4/24/2014 which was provided to AQD on 7/28/2016 is still current except for the cited additions/modifications. The drawing is saved in AQD files.

3.- REGULATORY ANALYSIS

The following description refers to the applicable regulations and the permit history for the facility.

The terminal is considered a major Title V source for VOC. The potential emissions of VOC exceed 100 tons per year. The operations are regulated under a Renewable Operating Permit (ROP) number MI-ROP-B2247-2009, with expiration date 12/11/2014. The ROP renewal application received by AQD Detroit District Office on 6/11/2014 has been reviewed. The company obtained an application shield and in accordance with Rule 217(1) (a) the current ROP shall not expire until the renewal permit has been issued. At the time of publication of this inspection report the proposed ROP is under the 45-day USEPA review period, which began on 9/28/2020 and will end on 11/12/2020.

Pursuant to 40 CFR 63.420(2), Buckeye has documented that the facility is not a major source of hazardous air pollutants (HAP) and is not located within a contiguous area and under common control of a facility that is a major source of HAPs. The facility is a minor

source of HAP emissions because the potential emissions of any single HAP regulated by the Clean Air Act, Section 112 is less than 10 tons per year and the potential emissions for all HAPs combined are less than 25 tons per year.

Most of the information in this section was included in the previous inspection report on 6/18/2018 and after adding a few updates it was incorporated into the ROP Staff Report during the 2020 ROP renewal. In the following paragraphs I am replicating part of the regulatory analysis information included on the ROP Staff Report to have it as a reference for source compliance evaluation. Refer to Table 1 for a summary of the permit history.

On September 16, 1982, the Wayne County Air Pollution Control Division (WCAPCD) issued Wayne County Permit Nos. C-6187 to C-6190 for EULODGING (the loading rack). Wayne County Permit No. C-6191 was issued on September 16, 1982 for the operation of the VRU for EULODGING. These permits were superseded by Permit to Install (PTI) No. 149-15, issued on September 15, 2015, for the truck loading rack and installation of a portable Vapor Combustion Unit (VCU) during periods of time when the VRU is offline. PTI 149-15 has been incorporated into the proposed ROP during the 2020 renewal process. EULODGING at the stationary source is subject to 40 CFR Part 60, Subparts A and XX, the New Source Performance Standards for Bulk Gasoline Terminals. An affected facility is subject to the provisions of Subpart XX if the construction or modification commenced after 12/17/1980.

WCAPCD issued permits for EUTANK#9 and EUTANK#12. EUTANK#9, originally a fixed-roof tank, was retrofitted with an internal floating roof (IFR) after Wayne County Permit No. C-7863 was issued on November 6, 1987. Wayne County Permit C-7863 also allowed the storage of various grades of gasoline in addition to kerosene and jet fuel. The permit was amended on November 6, 1995, to increase the material and emission limits. On April 1, 2000, the AQD issued PTI No. 364-99 to add distillate fuel oil as a product stored in EUTANK#9. Wayne County Permit No. C-7863 was superseded by PTI No. 364-99.

EUTANK#12 was originally constructed with a fixed roof and the IFR was added to the tank around 1993. Wayne County Permit No. C-11800, issued on September 8, 1998, for EUTANK#12 allowed the increase in material throughput and VOC emission limits, as well as the storage of other fuels. Permit C-11800 was replaced with PTI No. 314-98 issued by AQD on August 20, 1999.

Per 40 CFR 60.14(e), the permit revisions for EUTANK#9 and EUTANK#12 did not constitute a modification. Therefore, these tanks are not subject to 40 CFR Part 60, Subpart Kb, the Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

Since EUTANK#5, EUTANK#6, EUTANK#7, EUTANK#8, EUTANK#10, and EUTANK#11 were installed prior to August 15, 1967, this equipment was not subject to the New Source Review (NSR) permitting requirements at the time of installation. However, future modifications of this equipment may be subject to NSR. The tanks store organic compounds having true vapor pressures of more than 1.5 psia, but less than 11 psia at actual storage conditions in mostly fixed roof stationary vessels of more than 40,000-gallon. They are considered existing sources of VOCs and therefore subject to the requirements of AQD's Air Pollution Control Rule 604. Conditions pertaining to Rule 604 can be found in the ROP under FGGASTANKS.

On June 1, 1995, WCAPCD issued Wayne County Permit No. C-10736 for EUAIRSTRIPPER. This permit was superseded by PTI No. 200-16, issued on April 27, 2017, which modified the testing and monitoring requirements. PTI 200-16 has been incorporated into the proposed ROP during the 2020 renewal process.

The facility has a boiler which has been exempted under R 336.1282(b)(ii). The rated heat input capacity is less than 20 MMBTU per hour. When the boiler operated, Buckeye used number 2 fuel oil with less than 0.4% sulfur by weight.

During the ROP renewal process Buckeye Terminals LLC-Detroit Terminal requested the removal of EUBOILER from the ROP. Records showed that the 1.08 MMBTU/hour oil-fired boiler has not been used since 2012 and, according to the facility, will not be brought back into service. During the site visit on 6/25/2020 it was confirmed that EUBOILER is inoperable. Therefore, EUBOILER has been removed from the ROP. If Buckeye would like to operate EUBOILER or replace EUBOILER with a new boiler, Buckeye must first obtain a new permit to install pursuant to rules promulgated by the AQD, or demonstrate an exemption applies to the installation and operation of the boiler.

EUTANK#5, EUTANK#6, EUTANK#7, EUTANK#8, EUTANK#9, EUTANK#10, EUTANK#11, EUTANK#12, and EULOADING are subject to the MACT Regulations for Gasoline Distribution Bulk Terminals, Bulk Plants and Pipeline Facilities (40 CFR Part 63 Subpart BBBB). The terminal loading rack handles more than 250,000 gallons per day and the storage tanks have capacities of more than 75 cubic meters (19,813 gallons). Buckeye submitted the initial Notification of Applicability to AQD Detroit District Office in a letter dated 5/2/2008. AQD has not accepted delegation to enforce this area source MACT standard.

During the ROP renewal process, Buckeye documented and recorded that the emission screening factor (Et) in the equation listed in 40 CFR Part 63, Subpart R is less than 1 and complies with Sections 63.420(c), (d), (e), and (f) of the subpart. Conditions pertaining to 40 CFR Part 63, Subpart R, can be found in the proposed ROP under FGMACT6B. This is a revision with respect to the ROP issued in 2009.

The emission limitation(s) or standard(s) for VOC from EULOADING while using the VRU as control equipment at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(vi), because both the 35 mg VOC per liter of gasoline loaded standard and 0.7 pounds VOC per 1000 gallon of gasoline loaded standard meet the CAM exemption for a continuous compliance determination method. The continuous emission monitoring system (CEMS) utilized to measure VOC emissions from the VRU provides data either in units of the standard or it is correlated directly with the compliance limit.

If the portable VCU is used as the control unit, EULOADING is subject to CAM and the heat sensing device must continuously monitor the presence of a flame for the proper operation of the thermal oxidizer.

EUTANK#16, an existing 54,600-gallon pressurized butane storage tank, was added to the proposed ROP under the FGRULE290 flexible group. This Rule 290 regulated tank was not listed in the ROP issued in year 2009.

Finally, there are other emission units that are exempt from the requirements of Rule 201 to obtain a permit to install. Table 2 (updated on 6/25/2020) lists the exempt equipment and the specific rule exemptions claimed by the source.

4.- COMPLAINTS/COMPLIANCE HISTORY

No citizen complaints attributed to Buckeye-Detroit Terminal have been received by the AQD's Detroit Office since the last inspection conducted by AQD on 6/18/2018.

5.- OUTSTANDING CONSENT ORDERS

None

6.- OUTSTANDING VIOLATION NOTICES (VN)

As of the date of report posting of this report, there are no outstanding VN for this facility.

7.- INSPECTION DESCRIPTION

On 6/25/2020 at about 10 a.m. I arrived at the Buckeye Terminal at 700 S. Deacon, to conduct a facility inspection. I met with Michael Barret, Terminal Specialist and Randle Green, Terminal Operator.

After the introductions, I stated the purpose of the inspection, which is to evaluate the facility's compliance with respect to 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), and the conditions of the ROP number MI-ROP-B2247-2009.

AQD requested facility records on 6/19/2020 to evaluate the facility's compliance with the conditions and requirements of MI-ROP-B2247-2009. The records requested included: terminal loading rates, emission records, site operations and maintenance records. Most of the site operation and emission records were obtained from the central corporate system "BEST" (Buckeye Emission System) which supports all Buckeye's terminals. The records were provided by the Terminal Specialist in a flash drive he handed out to me on the day of the inspection on 6/25/2020.

At the opening meeting we examined the ROP special conditions and the applicable PTIs (PTI 149-15 and PTI 200-16) for each one of the emission units. A new query in Buckeye's recordkeeping system allows them to pull out a summary of the emission records based on the ROP permit limits for each emission unit.

The following list describes the information provided by Buckeye which will be incorporated in the listed Appendices:

A - Air Emissions Inventory. Emission Summary and Tanks Throughput Emissions for reporting period from June 2019 to May 2020

This appendix also contains: a) emissions breakdown details for roof landing, cleaning, and loading operations, b) product information and physical properties, c) monthly emission reports per tank and detail calculations, d) 12-month rolling records for tanks No. 9 and No. 12

B - Annual In-Service IFR seal "through-the hatch" inspections, tank-inspections schedule, and Out of Service (OOS) tanks inspections reports

C - ROP certification reports

D - VRU Relative Accuracy Test Audit (RATA) Report – April 9, 2019

E - VRU performance and preventive maintenance checklists

F - Loading rack header – Sample of pressure readings

G - Tank-Trucks Pressure/vacuum test certification form – Samples

H - Terminal loading standard operating procedures and rules

I - Listing of leaks for reporting period & leak detection logs samples

J - Example of CEMS Data for June 5, 2020

K - Air Stripper emissions and lab sampling results

Some of the information cited above has been printed out and it is attached to the report in AQD files. The USB Flash Drive is located with the report in the facility file at the AQD Detroit District office.

Mr. Green and Mr. Barret led the tour of the loading rack and the VRU premises. Mr. Green described the truck loading procedures and the VRU operations. The VRU system is equipped with a sensor that detects and controls VOC leakage. Any leakage detected in the loading system automatically results into a large pressure drop that triggered alarms. The system is then manually shut down.

During the inspection of the facility, I examined the site looking for sources of odors/leakage/spills. There were no noticeable odors or evidence of spills at the facility premises. The above-ground piping connecting the VRU to the tank farm was examined for superficial corrosion. Each of the tanks and associated above-ground piping seemed to be in good condition.

In general, from the observations of the loading racks, the mechanical conditions of the tanks, the equipment, and accessories; the facility looked in good condition and appeared to be working satisfactorily.

The terminal was very busy with truck loading activities occurring at the time we walked through the terminal area. I was told that the Buckeye River Rouge Terminal had stopped loading fuel for a few hours due to software maintenance and the trucks were redirected to go to the Detroit Terminal.

I observed one truck operator while he was loading fuel in his tanker-truck, in bay 3. He seemed to follow the loading procedures which are clearly posted on the loading rack area.

Due to various operations associated with facilities activities, water containing dissolved concentrations of gasoline requires treatment prior to discharge to the sanitary sewer system. The facility uses an air stripper to remove organic volatile compounds from the liquid phase. This process is also named "remediation process" in some of the Buckeye's documentation. The air stripper unit was not in operation at the time of the visit; however, I inspected the area. The facility collects water from tank bottoms, storm water runoff, and groundwater in a 4,000-gallon oil-water separator tank which they call petroleum contact water overflow (PCW). The treatment process is intermittent and operates when the water level in the above ground 10,000 gallon (PCW) holding tank reaches the high-level set point. VOC is removed by bubbling air up through the water flowing countercurrent through aeration trays. The removal efficiency of the unit is primarily dependent on the air and water temperature, air to water flow ratio, the surface area available for mass transfer and the volatility of the dissolved compounds. The operator indicated that the air stripper is generally operated after heavy rain periods. The treatment in the air stripper is manually started by the operator and the process takes a long time from start to finish due to low pumping rates. I asked about the sampling records that are collected from this process to determine compliance with the emission limits cited in the ROP for this unit. The laboratory sample records were provided during the inspection, but the emission calculations were provided later via email on 7/9/2020.

Except for the dismantling and removal of the fuel-additive tanks No. 13 and 14, there have not been any modifications at the terminal since the last inspection. The boiler continues to be out of service, unhooked, and it is still at the site but in very poor condition. After this inspection I agreed on removing it from the ROP as an active EU because it is not operable.

From the boiler location we walked to the warehouse, which is the building annex to the location of the boiler. I noticed a local heater hanging on the roof. It looked like a natural gas heater. I took a picture of it to search the manufacturer. It seemed to be an infrared radiant space heating system "RE-VERBER-RAY". I asked Mr. Barret to provide a description and the heat input information so that I could add it to the exempt equipment list. I said to him that the unit is most probably exempt from permitting under Rule 282(2)(b)(i); which applies to equipment using natural gas, with rated heat input capacities of less than 50,000,000 Btu per hour. I received a response via email on 7/16/2020 from Mr. Keith Ocheski, Sr. Manager Air Compliance at Buckeye Partners. He sent a picture of the metal plate that identified the equipment. The specs on the plate described the unit as a gas-fired radiant tube heater fueled with natural gas and with a heat input equal to 175,000 Btu/hr. He said that there were two units with the same capacity in the warehouse. With that information I confirmed that the heating units are exempt from permitting and were added to the exempt equipment summary table included in the ROP Staff Report.

After the walk around the plant we returned to the office building for the post inspection meeting.

During the closure meeting I indicated that I would examine the information collected during the inspection and prepare an inspection report with the results of the compliance evaluation. I added that additional questions or concern might come out during the preparation of the report and I may need to contact Buckeye for answers and/or clarifications.

I left the facility at about 2:30 PM.

8.- COMPLIANCE EVALUATION

The determination of compliance with the special conditions (SC) cited on the MI-ROP-B2247-2009 is based on: a) the observations made during the inspection of the facility, b) the review of the records for the period from June 1, 2019 to May 31, 2020, c) the evaluation of the information provided by Buckeye representatives during our meeting and via follow-up emails.

For simplicity, the special conditions cited on the MI-ROP-B2247-2009 are paraphrased.

The requirements that are common to more than one emission unit or those that are applicable to the source (as a whole) are grouped and evaluated first.

Special Conditions Applicable to EUTANK#9, EUTANK#12, and FGGASTANKS

Design/Equipment Parameter(s) & Monitoring/Recording SC IV.1 and VI.3 – (EUTANK#9 and EUTANK#12) & SC III.1 (FGGASTANKS) - In Compliance

Buckeye keeps records of true maximum vapor pressure of the material stored in all tanks. The true vapor pressures (TVP) at the actual storage temperatures are estimated by Buckeye based on the physical properties of each stored product (i.e. temperature, molecular weight, liquid density) and the specific RVP. This type of information is maintained in databases for all the products that are handled in each terminal and is part of their corporate records at all their terminals. The calculated TVP are listed on the BEST reports in the section titled "Liquid Content of Storage Tanks". For each tank there is a list with the liquid storage properties. See Appendix A. The records show that all liquid stored in

the tanks have true vapor pressure below 11 psia at the actual storage temperature conditions.

Buckeye demonstrated that the storage vessel holding organic liquid having true vapor pressure of more than 1.2 psia but less than 11 psia are equipped and maintained with an internal floating roof (IFR). The IFR rests upon and is supported by liquid being contained and has a closure seal or seals. In addition, the seal or seal fabric had no holes, tears, or other non-functional openings. Compliance with these requirements was evaluated by reviewing the tanks' annual inspections reports. The last annual in-service visual seal inspection was conducted in December 2019. Appendix B include copies of the "Through-The Hatch" inspection forms (checklists) used by the facility to inspect the seals of all tanks that are equipped with internal floating roofs. Inspection records for tanks No. 5 and 21 are not in Appendix B because tank No. 5 has not been used and tank No. 21 has been permanently removed from the site. The records did not report any problems or concerns for any of the tanks.

A summary table in Appendix B shows the tanks inspections schedule provided by Buckeye. According to that information, Buckeye hires external contractors to conduct various levels of tank inspections; each one with different scopes and objectives. There are comprehensive inspections such as those conducted with the tanks Out of Service (OOS) and others with the tanks in-service (i.e. external inspections, internal corrosion inspections, and up-close floating roof & seal inspections).

The most recent up-close seal inspections were conducted on Tanks Nos. 6, 10 and 11 on 8/28/2017, 6/29/2016 and 6/23/2017, respectively. The tanks inspections identified IFR problems that needed to be addressed to maintain an adequate operation. The repairs and modifications included simple to more complex tasks, from vacuum breakers installations and metal shoe seals, replacement of wiper seals to the replacement of existing floating roof with newly installed cable suspended aluminum pontoon floating roof. Maintenance and repair were completed to the defective tanks and fittings. Please refer to Appendix B for the specific details and repairs.

SC IV.2 (EUTANK#9 and EUTANK#12) - NA

This condition is not applicable. As indicated in the previous analysis, all the tanks are equipped and maintained with IFR and seals which function as the control system for the uncontrolled organic vapor that would otherwise be emitted into the atmosphere.

SC IV.3 (EUTANK#9 and EUTANK#12) & SC IV.2 (FGGASTANK) - In Compliance

Buckeye demonstrated that all openings except stub drains were equipped with covers, lids, or seals that met the following conditions:

- (a) Covers, lids, or seals were in closed position at all times, except when in actual use.
- (b) Automatic bleeder vents were closed at all times, except when the roof was floated off, or landed on, the roof leg supports.
- (c) Rim vents, if provided, were set at the manufacture's recommended setting or were set to open when the roof was being floated off the leg supports.

Most of the cited conditions are evaluated by the facility operators during the monthly routine inspections and during the annual visual inspections of the tanks. In addition, contractor's inspections are used to perform major tanks repairs identified in the routine inspections. Refer to Appendix B.

Monitoring/Recordkeeping

Records are maintained for a period of five years.

SC VI.1 - In Compliance

Buckeye keeps records of monthly and annual throughput of the material stored in all tanks. Monthly and 12-month rolling records from June 2019 to May 2020 are in Appendix A. Please note that SC is only a requirement cited for EUTANK#9 and EUTANK#12 but Buckeye monitors and collects the cited records for all tanks.

SC VI.2 - In Compliance

Buckeye demonstrated that they conduct annual in-service inspections through hatches. The last "Through-the Hatch" inspections were conducted in December 2019 -see Appendix B. According to the records, there were no problems or concerns for any of the tanks.

To access the serviceability of the tanks a more comprehensive inspection is conducted when the tanks are emptied and degassed. Buckeye follows API 653 to determine the routine/frequency of tank inspections, which seem to require an in-service inspection by external contractors every five years, and the OOS inspection every 20 years. The OOS inspection includes the evaluation of the following: foundation, bottom, shell, nozzles and appurtenances, fixed roof and floating roof.

The excel table in Appendix B shows the scheduled dates for OOS inspection for each tank. The nearest upcoming OOS inspection is scheduled for tank No. 7 on 5/7/2021. I requested copies of the most recent OOS inspections reports and received the reports for the inspections of tanks 5, 7 and 8. Tank No. 7 had the last OOS inspection in 2001. Tank No.5 and tank No. 8 had their last OOS inspections in year 2005. Tank No.5 has been idle for over 10 years. Appendix B includes copies of excerpts from the inspection reports.

In this section, as an example of the scope of OOS API 653 inspection, I will enumerate the more significant findings for Tank No.7's inspection.

Tank No.7 – OOS Inspection Date:5/7/2001

- Foundation: The contractors recommended re-working the grade to provide adequate drainage away from the tank, and to allow visual inspection of the shell-to-bottom joint area.
- Bottom: Thirty-one (31) areas of significant metal loss (underside corrosion) were found. The epoxy coating was blistering and starting to fail. Recommended remove and re-apply epoxy coating before returning to service.
- Shell: Recommendations include removing the brackets attached to the shell that had coating failures and rust around their welds, Cleaning and recoating the lower 18" on Course 1 which was fading and blistering.
- Nozzles and Appurtenances: Contractors recommended various corrective actions such as repairs, replacement to comply with API 650 standards, remove sharp edges, clean stains, etc. Some of the recommendations require immediate action and others could wait.
- Fixed Roof: Contractors recommended monitoring low areas around the perimeter of the roof that can hold water. Deck was fading and had rust stains throughout the entire roof. Cleaning and re-coating was recommended when scheduling permitted.
- Floating Roof: Contractors recommended replacing pontoons and installed the primary seal which had been removed.
- Corrosion at the bottom of the tank was described as "topside pitting on the bottom, under the coating". Also, the epoxy coating had numerous areas where the coating had failed. The contractor recommended repairs prior to returning the tank to service.

In 2018, during the previous AQD inspection at Buckeye, Paul Ransom (Assistant

Operator Manager for Buckeye Terminals) provided an update for all tanks. For Tank No.7 he indicated that the floor and floor coating of the tanks were repaired. The seal was replaced. The coating on the shell should be replaced but had not been completed. Since the next OOS inspection for tank 7 is scheduled to occur on 5/7/2021 I will use the above cited recommended actions to verify which one are still pending. Tanks 7 and 8 had other in-service inspections within the last five years but I did not ask for the reports which might contain follow-up.

Reporting Requirements – In Compliance.

There are certification reporting requirements listed under Section VII of the ROP that must be submitted pursuant to Rule 213, sub-rules (3)(c) and/or (4)(c).

Pursuant to General Conditions 21 and 22 of Part A, Buckeye promptly reports deviations when they occurred (SC VII.1). They also demonstrate compliance with the semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A (SC VII.2). Buckeye reports annual certification of compliance pursuant to General Conditions 19 and 20 of Part A (SC VII.3).

For the reporting period 1/1/2019 to 6/30/2019, the certification report was timely submitted by Buckeye and postmarked by AQD Detroit Field Office by 9/16/2019. The semiannual report for the reporting period from 7/1/2019 to 12/31/2019 was also timely submitted and postmarked by AQD on 3/15/2020. The 2019 annual certification report was received / postmarked by AQD Detroit District Office on 3/15/2020. All reports stated that the monitoring and associated recordkeeping requirements in the ROP are met. Semiannual and annual compliance certification and deviations reports are kept on file at the District Office. Copies of the ROP certification reports were also submitted as part of the records for this inspection. They are included in Appendix C.

SPECIAL CONDITIONS APPLICABLE TO EUTANK9

This Internal Floating Roof tank can store Gasoline and Distillate.

Refer to Tank 9 records, 12-month rolling summary report on Appendix A

Emission Limits -

SC I.1 - In Compliance

The records from the end of June 2019 to the end of March 2020 indicate that the VOC emission rate from Tank No.9 did not exceed the permit limit of 6.2 tons per year. Buckeye reported a VOC emission rate of 0.02 tons per year, based on a 12-month rolling time period as determined at the end of each calendar month. It is important to mention that the Wayne County Permit No. C-7863 established a VOC limit of 7.53 tons per year. However, that permit was superseded by AQD PTI No. 364-99, issued on 4/1/200, which established a more stringent VOC emission rate limit of 6.2 tons per year.

Material Limits

SC II.1 – In Compliance

According to the records, the material handled by Tank 9 during the evaluated period was Distillate Fuel Oil No. 2. Gasoline was not stored in Tank 9 during that period.

SC II.2 - In Compliance

Buckeye demonstrated that material limit for EUTANK#9 did not exceed 212,284,800 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. Records showed the highest throughput for the 12-month period ending June 2019 was 9,902,577 gallons per year of Ultra Low Sulfur Diesel -ULSD

Note: All other special conditions applicable to EUTANK9 that have not been addressed in this section of the report were either evaluated earlier or are non-applicable.

SPECIAL CONDITIONS APPLICABLE TO EUTANK12

Internal floating roof tank for the storage of Diesel, Gasoline, or Jet Fuel.
Refer to Tank 12 records, 12-month rolling summary report on Appendix A

Emission Limit(s)

SC I.1 - In Compliance

Buckeye demonstrated the VOC emissions rate from EUTANK 12 did not exceed 11.6 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. For the analyzed period the highest emissions were recorded for the 12-month ending on November 2019, December 2019 and January 2020, with total VOC emission of 0.09 tons per year

Material Limit(s)

SC II.1 - In Compliance

Buckeye demonstrated that material limit for EUTANK12 did not exceed 163,000,000 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. For the analyzed period, the maximum 12-month rolling was recorded for the 12-month ending January 2020. The material throughput was 86,386,165 gallons per year.

Note: All other special conditions applicable to EUTANK12 that have not been addressed in this section of the report were either evaluated earlier or are non-applicable.

SPECIAL CONDITIONS APPLICABLE TO EULOADING – Refer to PTI 149-15

Some of the ROP conditions listed for EULOADING were superseded on 9/25/2015 with the issuance of PTI 149-15. This PTI has been incorporated into the proposed ROP during the renewal process.

Loading Racks containing four loading bays as described below:

Terminal: Buckeye -Detroit	
Loading Rack Bay	Product
1	Denatured Ethanol (offload to tank only)
2	Gasoline
3	Gasoline, Distillate and Trans-mix (Trans-mix distribution will be discontinued from the loading rack)
4	Distillate

Emission Limits and Testing

SC I.1, SC I.2, SC V.2 - In Compliance

According to SC I.1 Buckeye must demonstrate that the VOC emissions from the EUNLOADING do not exceed 0.7 lbs. per 1000 gallons of gasoline loaded (80 mg/liter). To demonstrate compliance with this emission limit, Buckeye has conducted testing of the VRU. The last test was on April 1, 2010 which was conducted in accordance with MI-ROP-B2247-2009, SC V.2, and the test methods specified in 40 CFR 60.503. A stack test plan was submitted and approved by AQD prior to testing. The test results report was received by AQD within 60 days following the last date of the test. The results indicated that the VOC emissions were 0.36 mg/liter based on 119,500 gallons of gasoline loaded. Refer to facility files for VRU testing procedures and test details. Previous testing conducted on May 25, 2005 showed results of VOC concentrations of 1.88 mg / liter. The testing results obtained in 2005 and 2010 also comply with the more restrictive VOC limits established by Subpart XX- 40 CFR 60.502 (b), which was used in permit PTI 149-15 issued to Buckeye on 9/25/2015. PTI 149-15 condition SC I.2 limits VOC from EUNLOADING to 35 mg of VOC per liter of gasoline loaded. Please note that SC I.2 does not require VRU testing in a periodic basis, but it will be required at AQD's request. The Proposed ROP has maintained this condition.

Process/Operational Restriction(s) and Design/Equipment Parameters

SC III.1 - In Compliance

Buckeye had a throughput of more than 5,000,000 gallons of organic compound per year. Buckeye reported in their Michigan Air Emission Inventory (MAERS) a total of 234,020,410 gallons of fuel loaded for calendar year 2019 when all transfer racks operations are added. Buckeye did not allow the loading of any organic compound that had true vapor pressure of more than 1.5 psia at actual conditions from any stationary vessel into any delivery vessel located at the loading facility, unless the delivery vessel is filled by a submerged fill pipe. Buckeye indicated that all loading processes at the facility are conducted using submerged filled pipes. (Refer to Appendix H for Loading Rules and Procedures)

SC III.2 - In Compliance

Buckeye demonstrated that any delivery vessel located at the gasoline racks are controlled by vapor recovery system that capture all displaced organic vapor and air by means of a vapor tight collection line before loading can be activated. Buckeye has a Terminal Management System that does not allow the loading of products to the tank trucks unless the trucks are "properly" connected to the VRU and a valid "vapor tightness" certification is used. According to the loading procedures in Appendix H, to gain access to the terminal all drivers must use a card reader that identifies the truck with a unique ID. The ID is linked to of the "vapor tightness" certification issued to the tank-truck. Trucks that fail to renew their vapor tightness certification are not allowed to load at the terminal. Appendix G has examples of certification test results for tank trucks.

SC III.3a to 3e - In Compliance

Buckeye demonstrated that all delivery vessels located at a gasoline loading racks are equipped, maintained, or controlled with all the following:

- (a) An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any organic vapor could be loaded. Buckeye indicated that they provide a coupling on the vapor recovery hoses that depresses the interlocking system on tanker trucks.
- (b) A device to ensure that vapor tight collection line shall close upon disconnection so as to prevent the release of organic vapor.

Buckeye's indicated that each vapor hose has a one-way check valve to prevent the release of vapors upon disconnection.

(c) 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.

Buckeye's indicated that each loading arm had a dry-break coupler.

(d) Pressure vacuum relief valves that are vapor-tight and set to prevent the emission of displaced organic vapor during the loading of delivery vessel except under emergency conditions.

(e) Hatch openings that are kept closed and vapor tight during the loading of the delivery vessel.

The records located in Appendix F for the Header Pressure Test and the tank truck certification located in Appendix G, demonstrate compliance with conditions III.3d and III.3e cited above.

SC III.4 -In Compliance

Buckeye demonstrated they developed written procedures for the operation of all emissions control measures. The more important measures are posted in an accessible conspicuous location near the loading device.

As part of the driver training program, Buckeye requires all drivers to go through their Terminal Loading Procedures. Copies of the procedures are located in Appendix H.

SC III.5 - In Compliance

With the exception of the problems reported below identified during preventive maintenance inspections, Buckeye demonstrated that the VRU has been maintained and operated in a satisfactory manner over the last 12 months. In addition to the operator's daily routine checklist, an outside contractor performs quarterly preventive maintenance (PM) on the VRU and an annual comprehensive performance assessment. I requested examples of the most recent quarterly evaluations. The checklists with findings and recommendations for the inspections conducted on the 4th quarter of 2019 and the 1st and 2nd quarter of 2020 were provided. A copy of them are in Appendix E.

The VRU PM inspection of 1/28/2020 identified improper wiring of the gasoline failsafe Motor Operated Valves (MOV's) actuators and rewiring was recommended. Also, a problem was found with the motor starter for vacuum pump C-2. The motor starter was replaced. The improper wiring of the actuators seems to be a problem identified in 2018, which would have been addressed by the end of the year. AQD will follow-up on this issue in future inspections.

In the 2nd quarter inspection conducted on 4/14/2020 the unit was found to be running well but it was noticed that the Nitrogen gas (which is used in the CEMS) was running out too quickly. Operators suspected that the supply valve is not properly closing during daily test. All solenoids and selector switches were changed out.

As indicated earlier, the AQD has not accepted delegation to enforce Subpart BBBBBB area source MACT. Therefore, for details about the CEMS performance and downtimes (if any) refer to the MACT semiannual reports in the AQD files

Design/Equipment Parameter(s)

SC IV.1 - In Compliance

Buckeye demonstrated that the vapor collection and liquid loading equipment are designed and operated to prevent gauge pressure in the delivery tank from exceeding 450 mm of water (17.7 inches of water) during product loading. Compliance with this requirement is obtained by monitoring pressure using a calibrated pressure measurement device which is installed on the terminal's vapor collection system at the nearest location to the connection with the gasoline tank truck.

Buckeye monitors the header pressures at the vapor collection system and obtains performance records using the "Rack Management System" data collection. Appendix F shows an example of the Truck Rack Vapor Pressure Readings (in inches of water) for Bays 2, 3 and 4 at specific dates.

SC IV.2 - In Compliance

Buckeye demonstrated that no pressure vacuum-vent in the bulk gasoline terminal's vapor collection system will start opening at a system pressure less than 450 mm of water (17.7 inches). The information in Appendix G demonstrates compliance with this condition. It includes pressure/vacuum test results.

Testing/Sampling

SC V.1 - In Compliance

Buckeye demonstrated, in each calendar month, the vapor collection system, the vapor processing system, and each loading rack handling gasoline was inspected during the loading of gasoline tanks trucks for the organic loading compounds liquid or vapor leaks. The facility implements a monthly equipment leak inspection program (once per calendar month, no less than 28 days and no more than 35 days following the prior inspection) that uses detection methods such as sight, sound or smell to detect fugitive leaks. Inspection of the handling of gasoline during loading is performed using Leak Detection Logs (LDAR) forms. Appendix I includes the history of monthly leak detection for the period from June 2019 to May 2020 and examples of the inspection forms as they are logged in the system. The copies included in Appendix I do not show all the information that Buckeye collects. However, in past inspections I have checked some of the records in their computer screen and verified that the "actual" forms did include all the required information listed on 40 CFR 63.11089(a).

Testing/Sampling (SC V.3 and SC V.4); Monitoring/Recordkeeping (SC VI.6 and SC VI.7a)

Buckeye requires the reduction of TOC emissions to less than or equal to 80 mg/l of gasoline loaded; subsequently Buckeye is also subject to specific applicable testing and monitoring requirements set forth in 40 CFR Part 63, Subpart BBBBBB (SC V.3). If EULODING is operating in compliance with the enforceable state emission limit of 80 mg per liter of gasoline loaded or less, Buckeye is allowed under SC V.4 to submit a statement certifying the compliance status of EULODING in lieu of the testing requirements. It appears as if Buckeye has not submitted such statement. In the past, they have demonstrated compliance with the cited standard by conducting performance test on the carbon adsorption VRU (using approved testing procedures).

Per SC VI.6, and in compliance with 63.11092(b)(1)(i)(A) of 40 CFR 63 Subpart BBBBBB, Buckeye uses a Continuous Monitoring Emission System (CEMS) that is capable of measuring organic compound concentration and it is calibrated, certified, operated and maintained according to the manufacturer's specifications. The CEMS analyzes the concentration of volatile hydrocarbons being emitted from the VRU exhaust stacks. The system is designed for 24-hour operation. The CEMS's PLC

continuously monitors the outlet VOC concentration from the VRU stack and imports the data to an HMI /PLC where it is saved. According to Buckeye Notification of Compliance (NOC) which was effective on 10/31/2017, the exhaust is monitored by the CEMS to ensure it does not exceed a six-hour rolling average limit of 0.78 vol % propane, which corresponds to 10 mg per liter of gasoline loaded. If the outlet VOC concentration is exceeded, an alarm is sounded to alert terminal personnel and fuel loading at the truck rack is automatically stopped. This prevents the terminal from exceeding the mg/L emission limit.

The CEMS employs a vacuum pump and associated sampling apparatus (tubing, filters, pressure relief valve, flow and pressure regulators, etc.) to obtain a representative exhaust sample. The sample is introduced to a Non-Dispersive Infrared Gas Analyzer (NDIR) for concentration determination and the signal output from the NDIR is connected to the HMI/PLC.

In the event of a CEMS downtime, the facility would use an alternative monitoring parameter in accordance with 63.11092(b)(1)(i)(B). Additionally, in the event of VRU downtime, a Portable Vapor Combustion Unit (PVCU) will be brought on site. Buckeye would need to test the PVCU unit and meet the mg / liter emission limit imposed by the ROP. Alternative monitoring parameter will be observed for the PVCU per 63.11092(b)(1)(iii)(B).

Examples of the calibration procedures, daily CEMS reports and CEMS operation are available in the facility files under the MACT notification of compliance. For reference purposes, Appendix D of this report includes a copy of a recent "Relative Accuracy Test Audit" (RATA) on the CEMS, conducted on April 9, 2019. The results showed a Relative Accuracy of 0.36% which is below the 10% of the applicable standard (VOC CEMS in Stationary Sources Specification 8).

Monitoring/Recordkeeping

SC VI.1 and SC VI.2- In Compliance

Per condition SC VI.1, Buckeye demonstrated that they do not operate the EUNLOADING unless the VRU is installed and operating properly. Records of VRU operating log are kept all times that gasoline is loaded.

On a quarterly basis Buckeye demonstrated that the delivery vessels (loading trucks) are in compliance with the provisions cited under section SC III.3 for EUNLOADING (SC VI.2). The information on VRU Preventive Maintenance located in Appendix E, and 6B MACT reports demonstrate compliance with the above listed conditions.

SC. VI.3 - In Compliance

Buckeye conducts monthly leak inspections and the information is documented in the LDAR inspection forms that are maintained in their system. After detecting a leak and the source of a leak, they are repaired as soon as practicable (within fifteen calendar days after the leak was detected). In past inspections AQD have checked detected leaks and work orders to verify the repair time by browsing some of Buckeye LDAR Log forms on their computer screen. The repairs are generally completed within the required timeframe and if not, there are justified explanations. For the evaluated period, from June 2019 to May 2020 the monthly inspection forms reported no leaks detected. A copy of the LDAR Log records for the cited period has been included on Appendix I.

SC VI.4 (a) to (e) - In Compliance

The permittee keeps records of each monthly leak inspection as required under 40 CFR 60.5021(i). The leak records included all the information required by the cited regulation: a) Date of inspection, b) Findings, c) Leak Determination Method, d) Corrective Action, e) Inspector Name and Signature. Refer to Appendix I for the short forms. Checklists with the complete information are available upon request.

SC. VI.5 - In Compliance

The permittee keeps records of all replacements or additions of components performed on an existing vapor processing system. Records of all replacements or additions of components performed on existing vapor processing system are documented through PM and work orders. Refer to Appendix E.

Reporting

SC. VII 1 - In Compliance

Each time the portable VCU backup unit is used to control load rack emissions, Buckeye must notify the AQD of the date of the startup and the date that the unit is removed from the site. Buckeye has not used the temporary PVCU since August 2015. Buckeye notified AQD the date when the unit was removed from the site.

SC VII. 2 - In Compliance

In compliance with this condition and pursuant to 40 CFR Part 63, Subpart A and BBBBBB; Buckeye submits to AQD the following reports that apply to EULODGING.

Semi-annual reporting of emissions and CEMS performance records are submitted as part of the MACT semiannual reports. The reports showed if no excess emissions or parameter exceedances have occurred and whether the CEMS has been inoperative, out of control, repaired or adjusted. AQD did not review these reports to evaluate compliance with the cited requirements because the Division has not accepted delegation to enforce this MACT regulation.

Just as a reference, an example of CEMS log for June 5, 2020 is in Appendix J.

Other Requirement (s)

SC IX.1 - In Compliance

Buckeye is subject to 40 CFR 60, Subpart A and Subpart XX (NSPS standards), and they are also subject to 40 CFR Part 63, Subpart A and BBBBBB (MACT standards). Compliance with the applicable NSPS standards have been evaluated throughout the report. However, AQD has not delegation to implement and enforce the cited MACT standards. AQD receives copies of Buckeye's Subpart BBBBBB semi-annual certification of compliance reports but AQD does not determine compliance status.

SPECIAL CONDITIONS APPLICABLE TO EUAIRSTRIPPER (Refer to PTI 200-16)

Treatment of storm water run-off water, tank bottoms and groundwater.

Unless otherwise noted, records pertaining to EUAIRSTRIPPER are located in Appendix K. Please note that Permit PTI 200-16 was issued on April 27, 2017. The permit modified the time period in which the emission calculations are based. For compliance analysis AQD is using the period from June 2019 to May 2020.

Emission Limits

SC I.1 - In Compliance

Buckeye demonstrated VOC emissions from EUAIRSTRIPPER did not exceed 0.52 pounds per hour based on a calendar month. Records showed that the highest VOC calculated

value was 0.000943411 pounds per hour, recorded for June 2020. The equation in Appendix 7 of the PTI is used by Buckeye to determine VOC emissions.

SC I.2 - In Compliance

Buckeye demonstrated the Benzene emissions from EUSTRIPPER did not exceed 0.02 pounds per hour based on a calendar month. Records indicated the highest calculated emissions was 0.000101 pounds per hour, recorded for February 2020

Material Limit(s)

SC II.1 - In compliance

Buckeye demonstrated that the material limit on water flow rate to the Air Stripper did not exceed 168 gallons per hour based on a calendar month. For the evaluated period the highest average inflow rate was 3.0 gallons per hour, reported for February 2020. The value was noticeably lower than the highest values recorded in previous years.

Testing/Sampling

SC V.1 - In Compliance

The permit requires annual determination of VOC and benzene emission rates from the EUAIRSTRIPPER. Buckeye verifies the emissions of the cited pollutants in a quarterly basis by sampling the wastewater influent and the effluent at the Air Stripper. The VOC and benzene concentrations (in ug/mL) determined from the sampling results are used to calculate the emission rates of each pollutant in accordance with the equation cited on Appendix 7 of the ROP. Examples of sampling results are included in Appendix K.

SC V.2 – N/A

Upon request from the AQD, Buckeye shall provide verification of VOC and benzene emission rates from EUAIRSTRIPPER, by testing at owner's expense, in accordance with Department requirements.

AQD has not requested testing of the cited pollutants.

Monitoring/Recording

SC VI.1 - In Compliance

Buckeye uses a flow-totalizer to monitor the influent feed rate to EUAIRSTRIPPER. Monthly gallons are recorded and kept on file. Monthly monitoring data were provided for the analyzed period. Refer to Appendix K.

SC VI.2 - In Compliance

The wastewater influent rates are used in combination with the sampling results to demonstrate compliance with the VOC and benzene emission limits. Buckeye calculated the VOC and benzene emission rates from EUAIRSTRIPPER on a monthly basis as specified in Appendix 7.

SCVI.3 and 4. - In Compliance

Buckeye calculates the hourly average influent water flowrate to EUAIRSTRIPPER and the hourly average VOC and benzene emission rates on a calendar month using the AQD accepted procedures cited in ROP Appendix 7. The calculations are completed by the 30th day of the calendar month.

Reporting

N/A.

Stack/Vent Restriction(s)**SC VIII.1 - In Compliance**

The exhaust vapors from stack SV007 are discharged unobstructed vertically upwards to the ambient air. The dimensions of SV007 were not verified during the site visit; however, Buckeye indicated that the stack has not been modified since its initial installation.

8.- MAERS (Michigan Air Emissions Report System)

The 2019 MAERS report was received electronically on 3/12/2020. The report was reviewed and audited. The facility passed the audit. For audit details, please refer to the compliance activity report CA_ B224753203 in the facility file.

9.- COMPLIANCE STATUS

Based on the inspection conducted on 6/25/2020, Buckeye Terminal at Detroit appears to be operating in compliance with the applicable state and federal air regulations and the conditions of MI-ROP-B2247-2009, PTI 200-16, and PTI 149-15.

NAME

Handoral

DATE

11/10/2020

SUPERVISOR

JK