

B2247
MAWILA

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

B224745413

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: 06/20/2018
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

SOURCE: SRN B2247 - BUCKEYE TERMINALS, LLC – Detroit

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

INSPECTION DATE: 6/20/2018

INSPECTOR: Nazaret Sandoval - MDEQ, Air Quality Division

COMPLIANCE: PERSONNEL:

Kimberly Trostel - Senior Specialist, Air Compliance

Lee Ann Beck - Specialist, HSSE Compliance

TERMINAL PERSONNEL:

Paul Ransom - Operator Manager

Michael Barrett - Lead Terminal Operator

Dave Vantryon - 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.

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 and a pressurized butane tank.

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 6/29/2016, is current; except for the installation of three small fuel-additives tank identified as tanks No. 22, 23, and 24, which are exempt from permits to install. Table 2 which lists the exempt equipment has been updated to include those tanks.

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

3.- REGULATORY ANALYSIS

The terminal is considered a major Title V source because 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 is under review by the AQD Detroit District office. The company obtained an application shield and in accordance with Rule 217(1)(a) the existing ROP shall not expire until the renewal permit has been issued.

The facility is a minor source of hazardous air pollutant (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.

According to the update provided by Buckeye on 6/28/2016, most of the storage tanks regulated under the current ROP were installed and in operation before 7/1/1967. The installation dates go as far back as year 1920 for Tank No. 6, to year 1955 for Tank 12; with several of the tanks built in 1948 and in 1954. The tanks were installed to 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 Rule 604.

There are no records of Wayne County Air Use Permits or permit conditions for tanks No. 5, 6, 7, 8, 10, and 11. Therefore, since the tanks were installed prior to 7/1/1967, they are considered grandfathered with respect to Rule 201.

Table 2 lists the emission units that are exempt from the requirements of Rule 201 to obtain a permit to install. The specific exemptions have been identified in that table. The demonstration of the applicability of the listed exemptions was not requested at this time.

Refer to Table 1 for permit history:

In the late eighties and mid-nineties, the Wayne County Air Pollution Control Division (WCAPCD) issued permits for Tanks 9 and 12. Tank 9, originally a fixed-roof tank, was retrofitted with an internal floating roof (IFR) after WCAPCD permit No. C-7863 was issued on 11/6/1987. Permit C-7863 also allowed the storage of various grades of gasoline in addition to kerosene and jet fuel. The permit was amended on 11/6/1995 to increase the material and emission limits. C-7863 was voided on 2/1/2013.

Later, on 4/1/2000, AQD issued Permit to Install PTI 364-99 to increase material by adding distillate throughput and to allow the increase of the true vapor pressure of the stored liquid. PTI 364-99 was rolled into the ROP.

Tank 12 was originally constructed with a fixed roof and the IFR was added to the tank around 1993. Permit C-11800 issued on 9/9/1998 for Tank 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 Permit to Install (PTI) 314-98 issued by AQD on 8/20/1999. This PTI was rolled into the ROP and voided.

Tanks 9 and No.12 are the only tanks that have material limits and VOC emission limits. Those limits were added to the permits based on the applicable requirements at the time of the New Source Review (NSR) analysis when the modifications cited on the previous paragraphs were requested by the permittee.

The four-bay loading rack was permitted by WCAPCD on 9/16/1982 under permits C-6187 to C-6190. Permit C-6191 was issued by WCAPC on 9/16/1982 for the operation of the VRU. These permits have been incorporated into the ROP.

The permit to install the air-stripper was issued by WCAPCD on 6/1/1995 under permit number C-10736. Permit C-10736 was voided and it was incorporated into the ROP. A more recent permit to install (PTI No. 200-16; issued on April 27, 2017) regulating the Air Stripper, modified the testing and monitoring requirements.

Permit PTI 149-15, issued on 9/15/2015, allows for the temporary installation and operation of a vapor combustion unit VCU during periods of time when the VRU is offline.

All Wayne County Permits and PTIs identified above have been incorporated into the ROP, with the exemption of permits PTI 149-15 and PTI 200-16, which remain active and will be incorporated into the ROP when the renewal process is completed. In addition, the following permits already incorporated into the ROP need to be voided: C-6187 to C-6191, C-11800 and PTI 364-99.

The source is subject to the New Source Performance Standards (NSPS) for Bulk Gasoline Terminals promulgated in Title 40 of the Code of Federal Regulations, Part 60, Subparts A and XX. An affected facility is subject to the provisions of Subpart XX if the construction or

modification commenced after 12/17/1980.

The facility is 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.

Buckeye is not subject to the provisions of Subpart R – National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations). Pursuant to 63.420(2), Buckeye has documented that the facility is not a major source of HAP and it is not located within a contiguous area and under common control of a facility that is a major source of HAPs.

4.- COMPLAINTS/COMPLIANCE HISTORY

The last inspection conducted by AQD at this facility was on 3/29/2016. No citizen complaints have been received by the AQD's Detroit Office related to fallout or odors attributed to Buckeye- Detroit Terminal in the period since the last inspection.

5.- OUTSTANDING CONSENT ORDERS

None

6.- OUTSTANDING VIOLATION NOTICES (VN)

AQD issued a VN on 8/28/2015 for installing and operating a vapor combustion unit without first obtaining a Permit to Install (PTI). The facility applied for a PTI and the permit was issued by AQD on 9/25/2015. The cited violation is considered resolved.

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

7.- INSPECTION DESCRIPTION

On 6/20/2018 at about 12 p.m., I arrived at the Buckeye Terminal facility, along 700 S. Deacon, to conduct a facility inspection. The following Buckeye representatives were at the meeting: Kimberly Trostel - Air Compliance Senior Specialist, Lee Ann Beck –HSSE Compliance Specialist, Paul Ransom - Operations Manager (partially attended), Michael Barret - Terminal Specialist, Dave Vantryon - 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.

Facility records including terminal loading rates, emission records, site operations and maintenance records were requested during the opening meeting for the evaluation of compliance with the permit conditions. 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.

We examined the ROP special conditions and the applicable PTIs for each one of the

emission units. During our discussion, Ms. Trostel pulled out some of the records on her laptop as we evaluated each condition. Some printouts were handed out at the meeting. 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 at the end of the inspection on 6/20/2018:

A - Air Emissions Inventory. Emission Summary and Tanks Throughput Emissions for reporting period from June 2017 to May 2018

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 schedules and Out of Service (OOS) tanks inspections reports

C - ROP certification reports

D - VRU Relative Accuracy Test Audit (RATA) Report – dated April 25, 2018

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 20, 2018

K - Air Stripper Emissions

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. Dave Vantryon and Michael Barret led us on the tour of the loading rack and the VRU premises. Mr. Vantryon 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 conditions.

In general, from the observations of the loading racks, the mechanical conditions of the tanks, the equipment and accessories; the facility looked in good conditions and appeared to be working satisfactorily. There were no truck loading activities occurring at the time we walk through the terminal area. The truck loading procedures are clearly posted.

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 records were provided during the inspection, but the emission calculations were later revised per AQD request. Buckeye resubmitted the data via email.

With the exception of the installation of the additive tanks No 22, 23 and 24, which are located by the loading rack, there have not been any modifications to the equipment and/or loading rack since the last inspection. The boiler continues to be out of service, unhooked, but it is still at the site.

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

During the closure meeting I indicated that AQD will examine the information collected during the meeting and will 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 AQD may need to contact Buckeye for answers and/or clarifications.

I left the facility at about 5:00 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 2017 to May 2018, 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 (i.e. vapor molecular weight, liquid density) and the specific RVP for each stored product. This type of information is maintained on their databases as part of their corporate records for all their terminals. The estimated true vapor pressures are listed under the tanks details description and liquid storage properties in 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 tank inspection was conducted in October 2017. Refer to Appendix B. The records include "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 representatives during our meeting. According to that information, since the last AQD inspection to this facility, three tanks - Nos. 6, 10 and 11- had a recent up-close seal inspection in year 2017. In addition, Appendix C includes copies of the most recent Out of Service (OOS) tanks inspections, as well as the up-close floating roof and floating roof seal inspection form for Tank 11, dated 6/23/2017. The tanks inspections identified IFR problems that needed to be addressed to maintain an adequate operation. Maintenance and /repair was provided to the defective tanks and fittings.

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 inspections and also during the annual visual inspections of the tanks. In addition, OOS inspections are used to perform major tanks repairs identified in the routine inspections. Refer to Appendix B. Tanks Nos. 6, 10 and 11 had some major repairs and modifications including floating roof and seals replacement.

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 2017 to May 2018 are in Appendix A. Please note that this condition 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" inspection was conducted in October 2017 -see Appendix B. According to these 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 outside contractors every five years, and the OOS inspection every 20 years. The summary table in Appendix C shows the date of the last OOS inspection for each tank and the expected future inspection dates. AQD requested copies of the most recent OOS inspections reports. Appendix C includes a summary of the evaluation/repairs and the modifications conducted for tanks Nos. 6, 10 and 11 in year 2017. The repairs and modifications included simple to more complex jobs, such as; the installations of vacuum breakers and metal shoe seals, replacement of wiper seals, up to the replacement of existing floating roof with newly installed cable suspended aluminum pontoon floating roof. Please refer to Appendix C for the specific details / repairs.

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 1/1/2017 to 6/30/2017, the certification report was timely submitted by Buckeye and postmarked by AQD Detroit Field Office on 9/15/2017. The semiannual report for the reporting period from 7/1 to 12/31 was also timely submitted and postmarked on 3/15/2018. The 2017 annual certification report was received / postmarked by AQD Detroit District Office on 3/15/2018. All reports stated that the monitoring and associated recordkeeping requirements in the ROP are met, except for a deviation reported for the EUAIRSTRIPPER from 1/2017 to 4/2017. During that period Buckeye conducted monthly rather than daily flow monitoring and emission calculations. The facility submitted a PTI application to modify the monitoring and recordkeeping requirements for EUSTRIPPER. PTI 200-16 was approved by AQD on April 27, 2017 and the facility returned into compliance by implementing the approved monthly monitoring and recordkeeping requirements. No excess emissions were reported during the period of the cited deviations

Semiannual and annual compliance certification and deviations reports are kept on file at the District Office. Copies of the reports were also submitted the day of the inspection. They are included in Appendix D.

SPECIAL CONDITIONS APPLICABLE TO EUTANK9

This Internal Floating Roof tank can store Gasoline and Distillate.

For records review refer to Tank 9, 12-month rolling summary report on Appendix A

Emission Limits -

SC I.1 - In Compliance

The records indicate that VOC emissions from Tank No.9, based on a 12-month rolling time period as determined at the end of each calendar month, were less than the permit limit of 7.53 tons per year. The highest record in the period was 0.0217 tons and it was reported for the 12-month period ending April 2018.

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 April 2018, with 10,890,849 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.

For records review refer to Tank 12, 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 May 2018, with total VOC emission of 0.0485 tpy, from Tank 12.

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 May 2018. The material throughput was 42,076,943 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 will be rolled into the 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

Per S.C. 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 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 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. AQD has not requested recent testing of the VRU.

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 113,539,988 gallons loaded for calendar year 2017 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.

The VRU test results in year 2010 demonstrated that the recovery of organic vapors is such that the emissions to the atmosphere does not exceed 0.7 lbs. of organic vapor per 1000 gallons of organic compounds loaded.

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 (which were promptly addressed), 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, the facility hires a outside company to perform quarterly preventive maintenance (PM) on the VRU. The second quarter PM was conducted on May 23, 2018. A copy of the report is located in Appendix E.

The work and recommendations on the PM report indicated that vacuum leaks found at the inlet valves on carbon beds 1 and 2 were corrected. The vacuum gauges in both carbon beds were replaced. A recommendation to rewire the "failsafe" motor operated valves, will be completed during next PM (3rd quarter of 2018).

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 2017 to June 2018 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, during the site visit I 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. Instead, 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 a HMI /PLC where it is saved. 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 recent "Relative Accuracy Test Audit" (RATA) of the CEMS conducted in April 25, 2018.

Monitoring/Recordkeeping**SC VI.1 and SC VI.2- In Compliance**

Per condition SC VI.1, Buckeye demonstrated that they do not operate the EULODING unless the VRU is installed and operating properly. Records of VRU operating log are kept all times that gasoline is loaded. The records show that for calendar year 2017, the total VOC emissions from all the loading operations before controls were about 225.5 tons. After passing through the VRU, the emissions were reduced to approximately 0.154 tons of VOC.

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 EULODING (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

The permittee recorded detection of each leak, and the source of the leak was repaired as soon as practicable (within fifteen calendar days after the leak was detected). AQD did not check work orders to verify the repair time, but details of compliance were evaluated the day of the inspection by browsing some of Buckeye LDAR Log Forms on their computer screen. A sample of the inspection records and leak records was provided in the LDAR Log Form saved on Appendix I. It appears as if the repairs were completed within the required timeframe.

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 details.

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 were documented through PM and Work Orders as indicated in 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 DEQ the date of the startup and the date that the unit is removed from the site. Buckeye has not used the temporary PVCU after the cited situation occurred in 8/2015. 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 BBBB; Buckeye submits to AQD the following reports that apply to EULODING.

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 20, 2018 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 BBBB (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 BBBB semi-annual certification of compliance reports but they are not evaluated by AQD.

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 2017 to May 2018.

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 0.0132 pounds per hour, recorded for February 2018. 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 were 0.000672 pounds per hour, recorded for February 2018

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. Records indicate the highest average inflow rate was 28.1 gallons per hour, recorded for May 2018.

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.

SPECIAL CONDITIONS APPLICABLE TO EUBOILER

A boiler with a heat input capacity of 1.08 MM BTU per hour has been out of service since 2012, yet, it is still on the site.

In terms of permitting under Rule 201, the boiler seems to comply with exempt requirements cited under R336.1282 (b) (ii): This is a fuel-burning equipment used as a service water heating. Buckeye uses number 2 fuel oil with less than 0.4% sulfur by weight; the rated heat input capacity is less than 20 MMBTU per hour.

Buckeye should verify the applicability NESHAP 'Area Source Boiler MACT" - 40 CFR 63, Subpart 6J, if they believe the boiler could potentially be in operation.

8.- MAERS 2017

The MAERS 2017 was reviewed and audited. The facility passed the audit. For audit details, please refer to the compliance activity report CA_ B224744407 in the facility file.

9.- COMPLIANCE STATUS

Based on the inspection conducted on 6/20/2018, Buckeye Terminal, Detroit was found to be operating in compliance with the applicable state and federal air regulations.

NAME

Affandoval

DATE

8/15/2018

SUPERVISOR

JK