

B2987

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

MANILA-Insp. Report FY 2017

ACTIVITY REPORT: Scheduled Inspection

B298741238

FACILITY: Buckeye Terminals, LLC - River Rouge Terminal		SRN / ID: B2987
LOCATION: 205 MARION AVE, RIVER ROUGE		DISTRICT: Detroit
CITY: RIVER ROUGE		COUNTY: WAYNE
CONTACT: Kimberly Trostel, Air Compliance - Senior Specialist		ACTIVITY DATE: 08/04/2017
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: FY 2017 - Scheduled Inspection		
RESOLVED COMPLAINTS:		

SOURCE: SRN B2987 - BUCKEYE TERMINALS, LLC – River Rouge

FACILITY ADDRESS: 2015 Marion Avenue, River Rouge, Michigan 48218

INSPECTION DATE: 7/26/2017 and 8/4/2017

INSPECTOR: Nazaret Sandoval - MDEQ, Air Quality Division (AQD)

BUCKEYE PERSONNEL:

Kimberly Trostel - Senior Specialist, Air Compliance:

Dennis Coleman - Terminal Specialist.

Chad Rutterbush - Terminal Operator

MAIN COMPLIANCE CONTACT: Kimberly Trostel, ktrostel@buckeye.com

Office: 419 993-8003; Mobile: 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 routine site visit. The plant staff will provide coveralls to AQD inspectors at the time of the visit if special protection is required under unusual circumstances or special projects. Buckeye recommends caution and would rather keep visitors away from working areas that could potentially be a threat.

2. FACILITY DESCRIPTION

Buckeye Terminals, LLC at River Rouge is located at 205 Marion Industrial Avenue in River Rouge, Michigan. The facility lies about one quarter mile to the east of West Jefferson Avenue in a primarily industrial area. The nearest residences are approximately 225 yards to the northwest of the facility's truck loading rack.

The facility is a petroleum hydrocarbon fuels distribution terminal. A variety of common petroleum products are received by pipeline and stored at the facility. The products include regular, midgrade, and premium unleaded gasoline and distillate fuel oil No. 1 and 2. The terminal has a seven-bay tank truck loading rack with lanes numbered from 1 to 7 from north to south. Lanes 1, 2, 3 and 4 are for gasoline-only; bay 5 is for gasoline and diesel loading, and lanes 6 and 7 are for diesel-only. Gasoline and distillate are bottom loaded into tank trucks for distribution to marketing stations. Each rack is equipped with hoses and associated piping that hook up to a vapor control system.

During loading operations, the vapors displaced by the liquid being loaded into the 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.

The facility is capable of operating 24 hours per day, 365 days per year. The number of truck loadings per day varies with market trends. In recent years the facility loads an average of 220 trucks per day.

The facility has a variety of tanks (small, medium and large sizes) located in the north and south tank farms at each side of Marion Avenue. About half of the tanks are above-ground vertical tanks used for the storage of final products. The average tank shell-capacity is in the range of the 3.5 million gallons. Gasoline additives and diesel additives are stored in small fixed roof tanks. The additives are metered into the fuels during tank truck loading.

Tank designs include internal floating roof (IFR) and/or external floating roof (EFR) equipped with weather covers, fixed cone roof, and the horizontal cylindrical type.

Most of the large-size tanks at the facility are equipped with internal floating roofs controls. The exceptions are: the tanks used for diesel storage, the two 9,000-gallon tanks storing waste water petroleum products, and the 15,000-gallon water reclamation tank; all of which are fixed-roof tanks.

The facility has a 117,905-gallon horizontal pressurized butane tank which was installed at the location in year 2012. Butane is used as a blending component added to the gasoline mixture when loading the trucks. Ethanol is also blended with gasoline, and it is used to reduce the carbon monoxide emissions. Denatured ethanol (gasoline-ethanol blend) is stored in a dedicated tank.

The facility has an air stripper unit operation for the treatment of run-off water. The unit operates in the "Water Remediation Building" located at the North Farm Tank near the River Rouge.

For specific details about the capacities and/or sizes of the tanks, the year of installation, type of service, as well as the location of the equipment and processes cited above; refer to the terminal layout and/or the facility's record files.

The three main sources of VOC emissions at the terminal are the loading rack, the storage tanks and equipment leaks. The loading rack is the primary source of evaporative emissions and these emissions are controlled by the VRU. The second important source are the VOC emissions from organic liquids in storage due to evaporative loss of the liquid as a result of changes in the liquid level. The control of these emissions will depend on the type of tank (floating roof or fixed roof) and its configuration. Emissions from fixed roof tanks are classified as breathing or standing losses and working losses. The standing losses are evaporative losses during storage as a result of heat expansion due to cyclical (diurnal and seasonal) temperature variations. The working losses are evaporative losses during filling and emptying operations. External and internal floating roof have standing storage losses through rim seals, deck fittings and/or deck seams; and withdrawal losses. Equipment leaks from various types of equipment (e.g., valves, pumps, flanges, pressure relief devices etc.) are another source of emissions. However, equipment leaks at the terminal tend to be relatively small compared to the overall emissions.

3. PERMIT BACKGROUND AND REGULATORY ANALYSIS

The stationary source is Major Title V source subject to Title 40 of the Code of Federal Regulations (CFR), Part 70, because the potential to emit volatile organic compounds exceeds 100 tons per year. The operations are regulated under a Renewable Operating Permit (ROP) number MI-ROP-B2987-2016 with an effective date of March 1, 2016.

The stationary source is considered to be a minor source of HAP emissions because the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

No emissions units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451, because at the time of New Source Review permitting the potential to emit of volatile organic compound was less than 250 tons per year.

The loading rack (EULOADRACK) at the stationary source is subject to the Standards of Performance for Bulk Gasoline Terminals promulgated in 40 CFR, Part 60, Subparts A and XX.

Additionally, the stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Gasoline Distribution Bulk Terminals, Bulk Plants and Pipeline facilities promulgated in 40 CFR 63, Subpart A and BBBBBB (MACT 6B).

Some of the storage tanks installed or modified after July 23, 1984 are subject to 40 CRR 60, Subpart Kb. A comparison of NSPS (Subpart Kb and XX) with MACT6B shows that the NSPS requirements are included in, or superseded by, the requirements of the MACT6B.

The stationary source is not subject 40 C.F.R. Part 63, Subpart R. Buckeye River Rouge has demonstrated that is a minor source of hazardous air pollutants (HAP) and documented and recorded that the emission screening factor (ET) for bulk terminals is less than 0.5. The source also complies with the additional requirements cited on the applicability section of Subpart R. The source does not require submitting annual calculations of ET to AQD but agreed to keep the demonstration on file, and maintain records to demonstrate that none of the facility parameters used to calculate ET have changed or exceeded in any rolling 30-day period. Notification of expected HAP emission changes will be provided to AQD.

Part 6, R336.1604, R336.1609 and R336.1627 of the Michigan Department of Environmental Quality (DEQ) AQD administrative rules are also applicable to this stationary source.

On March 15, 2013, the facility obtained a permit (PTI 189-12) to install two new control units: the Jordan VRU, which replaced the old VRU and a portable VCU (PVCU) that was used during the installation of the permanent VRU. Both units achieved the same level of VOC control (10 mg / liter of gasoline loaded) as the existing VRU. In addition, the old vapor combustion Unit (John Zink design VCU) was removed from the terminal. The old VCU was last used in January 2015. PTI 189-12 was incorporated into the ROP during the renewal process in 2016. Buckeye is allowed to operate the PVCU when the VRU is out of service for maintenance or during emergency situations.

The following description identifies the emission units (EU) regulated under the ROP:

EULOADRACK is a seven-bay petroleum truck loading rack.

EUTANK57 is a 3.2 million gallon vertical tank with a fixed roof for the storage of distillate fuel oil with installation date of November 1993. Buckeye agreed to use this tank to only store organic materials that have a true vapor pressure of 0.5 psia or less, so the provisions of NSPS, 40 CFR 60, Subpart Kb do not apply to EUTANK57.

There are two (2) additional fixed roof tanks, EUTANK13 and EUTANK 21, covered under FGDISTTANKS. These two tanks have installation dates in the mid to late 1920s

EUTANK8, EUTANK52 and EUTANK53 are less than 10,000 gallons each. The tanks are grouped under FGFIXEDROOFTANKS. The tanks were installed before July 1, 1979, so they were exempt from New Source Review (NSR) permitting requirements at the time of installation. However, future modifications of this equipment may be subject to NSR.

Nine (9) petroleum tanks mostly used for gasoline service are grouped under FGGASTANKS: EUTANK14, EUTANK15, EUTANK16, EUTANK17, EUTANK18, EUTANK20, EUTANK23, EUTANK24 and EUTANK25. The emission units in FGGASTANKS are controlled by internal floating roofs and external floating roofs equipped with weather covers. Most tanks were installed in the late 1920s.

The facility operates FGAIRSTRIPPER, a water remediation system consisting of an air stripper that removes VOC from the water decanted at the oil/water separation tank.

The terminal has a Butane tank, EUBUTANE.

EULOADRACK, and the following storage tanks: EUTANK 14, EUTANK12, EUTANK15, EUTANK16, EUTANK17, EUTANK18, EUTANK20, EUTANK22, EUTANK23 and EUTANK56, are regulated under MACT 6B, and have been grouped under FGMACT6B in the ROP.

The emission units, EUTANK12, EUTANK22, and EUTANK56, are three (3) tanks controlled by internal floating roofs with installation and/ or modification dates post July 23, 1984, which makes them subject to the Standards of Performance for Volatile Organic Liquid Storage Vessels promulgated in 40 CFR 60, Subparts A and Kb. These tanks are grouped under FGGASNSPS

The emission limitations for VOC from EULOADRACK at the stationary source is exempt from the federal Compliance Assurance Monitoring (CAM) regulation under 40 CFR Part 64, because the emission limitation is addressed by 40 CFR 63, Subpart A and BBBB.

Ten of the tanks used for additive storage are relatively small and are exempt from NSR permit requirements under R.336.1284 (i). Three furnaces used for building heating are exempt under rule R336.282 (b) (ii). All exempt equipment is identified in a separate document.

4. COMPLAINTS HISTORY

The last inspection conducted by AQD at this facility was on 1/7/2015. During the period since the last inspection, the AQD's Detroit Office has not received any citizen complaints related to fallout or odors attributed to Buckeye- River Rouge Terminal.

5. OUTSTANDING VIOLATION NOTICES (VN)

The most recent VN issued to Buckeye River Rouge Terminal is dated 11/18/2013. The VN was issued for operating a portable vapor combustion unit (PVCU) to control EULOADRACK without a stack. That was a violation of PTI 189-12 for EULOADRACK.

The cited violation was resolved by installing a stack to the PVCU and by conducting a stack test which results demonstrated compliance with the VOC emission limits established in PTI 189-12.

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

6. INSPECTION NARRATIVE

The purpose of the inspection 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-B2987-2016.

The inspection was conducted in two different visits. On the first visit, on July 26, 2017, the objective was to discuss the special conditions and requirements of the ROP and to gather the appropriate records to evaluate the compliance status of the facility. On that day, I arrived at the facility at about 1 PM and met with the Buckeye personnel identified on the headings of this report.

After the introductions and discussion, Ms. Trostel and Mr. Coleman provided copies of the records requested (i.e. monitoring, production, emission, maintenance and site operations records). I asked if there have been any changes in the terminal since the last inspection, tanks out of service, any new products, and/or malfunctions.

I was informed that the Ethanol tank (tank No. 16) was out of service for maintenance and modification. At the time of the writing of this report AQD issued permit No. PTI 100-17 for the modifications of the tank. The main change in the tank includes the replacement of the internal floating roof (IFR). The roof material of the new IFR will be aluminum instead of steel. The IFR will be a cable-supported IFR instead of being supported by standing legs. In addition, the new IFR will have an additional guide pole, which will potentially increase the emissions. Therefore, since the tank will be modified, it will be subject to NSPS regulations under Subpart Kb.

Tanks numbered 14, 21, 24 and 25 have been out of service for more than 20 years.

After a short discussion and gathering of the records, I concluded the first visit indicating I would return to the terminal for a site-walkthrough. I left the facility at about 4:00 PM.

The second visit occurred on August 4, 2017. I arrived at the facility at about 10:30 AM.

The weather conditions were partly cloudy with a temperature around °73 F and 17 mph winds out of the southwest.

I met with Mr. Dennis Coleman and Mr. Chad Rutterbush. Before the site inspection I asked Mr. Coleman to provide a general description/overview of the equipment and storage tanks located at the terminal. We used a facility layout [Appendix A] to identify the location of the tanks, the loading rack, the auxiliary equipment and the vapor control unit. It was noticed that the tanks capacities listed on the summary table of the facility diagram are

listed as shell storage capacities. The shell storage capacity is the rated design capacity of a petroleum storage tank which is always greater than or equal to the working/operational storage capacity cited in the ROP.

I asked for information about the Butane system. Mr. Coleman introduced me to Mr. Norman J. Socha, who is the Butane Blending Coordinator for Buckeye. He explained the role of Butane as a blending element in gasoline. Butane has a Reid Vapor Pressure (RVP) of 52 psi, which means pure butane is a gas at normal pressures and temperatures. However, it is maintained in its liquid phase in a low pressurized tank. Butane can be blended into gasoline and its fractional contribution to the blend roughly determines its fractional contribution to the overall vapor pressure of the mixture. I asked Mr. Socha about the likelihood of having a release of vapors from the Butane system during withdrawal operations. He said that protocols and operational variables are maintained to keep the system safe and under the specified pressures so that the pressurized system remains as a closed-system. He indicated that vapor emissions from Butane withdrawal operations are unlikely.

I asked about the run-off water treatment and the air stripper operations. Run-off water containing dissolved concentrations of petroleum products from all areas of the terminal is collected in an oil-water separator. From the oil-water separator, the oily portion - Petroleum Containing Water (PCW) – is sent to tanks No. 52 and 53. The water portion is sent to the water collection tank No. 3R. From tank 3R, the wastewater is pumped to the air stripper unit for treatment, previous to the discharge to the sanitary sewer system. The operation of the air stripper is controlled by the water level on tank 3R. There are 9 feet of working volume, the pump starts sending water to the air stripper when the level in tank 3R reaches 15 ft. and stops at 6 ft. of liquid level. A company is hired to haul and treat the oily portion collected in tanks No. 52 and 53.

I verified if the list of emission units identified as exempt equipment in the ROP Staff Report prepared in 2015 (during the last ROP renewal) matched the units installed at the facility, and/or if there was any new added equipment. Ten out of the thirteen exempt storage tanks matched the tanks listed on the ROP Staff Report. The three-vertical fix-roof wastewater storage tanks identified with the numbers 54A, 54B and 54C are not currently in the facility. After consulting Ms. Kimberly Trostel, she indicated via email on 8/8/2017 that the tanks 54A, 54B, and 54C were old tanks used in conjunction with an old oil water separator system. These tanks have since, and before Buckeye's ownership, been dismantled and removed. The three furnaces (exempt under Rule 282 (b) (ii)) are still part of the building heating system. Two 4-hp gasoline IC engines (EUICE1 and 2) are part of the "trash pumps". However, the 15-hp gasoline ICE engine identified as EUICE is no longer at the terminal.

Tank 55, with a shell capacity of 573,000 gallons, is known by the facility operators as the "vapor holding tank". This tank is not listed in the ROP and it is not identified as exempt equipment. According to Mr. Coleman, this tank is used during maintenance operations of the VRU to hold vapors. I contacted Ms. Trostel and asked for permitting information about this tank. In an email dated 8/16/2017, Ms. Trostel said that tank 55 is a "bladder tank," or vapor holding tank for the VRU. She added that the tank is a closed system and does not emit VOC's due to the internal bladder. From her observations, it is inferred that this tank has been permitted as part of the VRU.

All the clarifications cited above for the Air Stripper and the exempt equipment shall be noted for future ROP updates. At the conclusion of this report, I asked Buckeye to submit an updated list of their exempt equipment with the applicability demonstration of the selected rule exemption.

I asked if there were any other equipment and/or potential sources of emissions; such as, emergency generators, boilers, etc. There are no emergency generators or boilers at the terminal.

Mr. Dennis Coleman and Mr. Chad Rutterbush accompanied me in the tour of the facility. We drove by the terminal. Our first stop was at the loading rack and at the VRU. Mr. Coleman described the truck loading procedures and the VRU operation.

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 VRU controls VOC emissions with 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.

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.

I observed a tank truck operator that was using the loading rack to fill his tank-truck and he seemed to be following the truck loading procedures.

We continued our driving along the route of the tanks-farm. During the visual inspection of the facility I examined the premises for sources of odors or visible emissions. There were no noticeable odors and no visible emissions. The above-ground piping connecting the VRU to the tank farm was visually examined, as well as the mechanical conditions of the tanks, and the presence of corrosion. Each of the tanks and associated above-ground piping seemed to be in good conditions. In general, from the observations of the loading equipment and accessories, the facility looked in good conditions and appeared to be working satisfactorily.

Next, we drove to the location of the Air Stripper, which is known in the terminal as the "Remediation Building", and we stopped there to inspect the system. 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. 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.

At the time of the visit the air stripper unit was out service. Mr. Coleman indicated that they needed to replace a piece of equipment. The piece identified as 'Stripper Blower" was standing on the floor of the "Remediation Building" waiting to be installed. I observed some water leaking from the horizontal holding tank adjacent to the air stripper, which was disconnected for the equipment. Mr. Coleman indicated that all the water has been collected in the floor drainage, and it should not cause any problem. He added that the whole problem will be fixed in a couple of days when the missing piece is re-connected to the system and to the air-stripper.

We finished our walkthrough with a stop at tank No.16 (the ethanol tank) which was out of service for maintenance. Maintenance work is being performed during the last month and they were still working on it.

We returned to Mr. Coleman's office and the inspection of August 4, 2017 concluded at about 12:30 PM.

During the closure meetings, I indicated that AQD will examine the information collected 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.

This list of appendices describes the records provided by Buckeye either at the time of the site visits or via email after the inspections. The information is referred in the report and it is available at AQD record files:

Appendix A: Facility Layout, Tanks Design and Liquid Contents Properties

Appendix B: VRU and PVCU – Performance Test Results and Preventive Maintenance Checklists

Appendix C: Production and Emission Records for period June 2016 to June 2017

Appendix D: Leak Detection and Repair Logs (LDAR)

Appendix E: Trailer Vapor Tightness Certification

Appendix F: Driver Agreement Loading Procedures and Terminal Posted Procedures

Appendix G: Spill Prevention Control and Countermeasure Plan (SPCCP) – Table of Content (updated in 2017- for full report refer to AQD SPCCP files)

Appendix H: Tanks Inspection Schedule and Annual "Through-The-Hatch" Inspection Forms for Tanks Other Than NSPS

Appendix I: NSPS Tanks - Annual "Through-The-Hatch" Inspection Forms; "2014 OOS Inspections for Tank No. 56" and "2014 In-Service -top side- Seal Inspection for Tanks Nos. 12 and 22"

Appendix J: Air Stripper Monthly Records and VOC Lab Sampling Results

Appendix K: EUBUTANE – Rule 290 Applicability Demonstration

7. COMPLIANCE EVALUATION - PERMIT MI-ROP-B2987-2016 (ROP)

In general, this evaluation covers the period from 8/4/2016 to 8/4/2017, although historical data is presented in some sections of the report. The evaluation is conducted analyzing the special conditions applicable to each one of the emissions units (EUs) identified in the ROP, except for the following common requirements that are applicable to all or various (EUs):

ROP Common Requirements

- Certification and Reporting [SC VII.1 to SC VII.3]

These special conditions refer to certification and reporting requirements that are applicable to all the FGs and/or EUs listed in the ROP. The reports and certifications must be submitted pursuant to Rule 213, sub-rules (3)(c) and/or (4)(c).

SC VII.1 - Pursuant to ROP general conditions 21 and 22 of Part A, Buckeye promptly reported deviations when they occurred.

SC VII.2 – Buckeye demonstrated compliance with the semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A

SC VII.3 - Buckeye reported annual certification of compliance pursuant to General Conditions 19 and 20 of Part A.

In Compliance - The semiannual deviation reports and annual certifications were timely submitted in accordance with the terms and conditions cited on the ROP. For details on deviations (if any), refer to the Full Compliance Evaluation (FCE) summary for the specific postmarked dates when ADQ Detroit Office received the semiannual and annual reports. Semiannual and annual compliance certification and deviations reports are kept on file at the District Office.

- Process/Operational Restrictions & Monitoring/Recordkeeping
Applicable to all storage tanks and the loading rack

Several permit conditions (cited below or in another section of this report) require Buckeye to monitor and maintain records of the maximum true vapor pressure (TVP) of their stored petroleum products at actual storage conditions:

[SC III. 1] - This special condition limits the true vapor pressure of the materials stored in all FGDISTTANKS to less than 1.5 psia at the actual storing conditions.

For EUTANK57, Buckeye accepted the limitation of storing organic compounds which have vapor pressure not exceeding 0.5 psia to avoid becoming subject to 40 CFR 60, Subpart Kb.

[SC IV.1 EULOADRACK, SC VI.3 FGGASNSPS, SC VI.1 FGGASTANKS, FGDISTTANKS]

In Compliance - According to information in our files, Buckeye measures and records the maximum TVP of every batch of gasoline material entering the site. However, they do not directly measure the TVP of inbound distillate materials; instead, they use the point of entry vapor pressure evaluation with supplemental per-shipment specification validation. For details about distillate materials, please refer to the "ROP Certification for TVP of Distillate Materials" dated 11/11/2011, in Appendix A.

The records show that the TVP are below the permit limits. The details identifying each tank and the physical characteristics, as well as the properties of the stored materials are maintained on Buckeye's databases as part of their corporate records for all their terminals. Refer to "Liquid Contents of Storage Tank" in Appendix A for the specific values of TVP of the material stored at each tank.

EULOADRACK

Seven bay petroleum products truck loading rack

Pollution Control Equipment: Permanent Vapor Recovery Unit (VRU) or temporary Portable Vapor Combustion System (PVCU) that is not kept at the site

I - Emission Limits

[SC I.1] - **In compliance:** Buckeye demonstrated the VOC emissions from EULOADRACK did not exceed 10 mg/liter of gasoline loaded based on 6-hour test average. The most recent test of the VRU was conducted on April 22, 2015. The results indicated the VRU showed emissions of 1.15 mg/liter [Appendix B includes a summary of the test results].

II - Material Limits

[SC II.1] - **In compliance:** Buckeye demonstrated the gasoline throughput in EULOADRACK did not exceed 850,000,000 gallons/year based on 12-month rolling-time period as determined at the end of each calendar month. Records covering the last 12 months (from June 2016 to June 2017) showed a maximum throughput of 615,494,292 gallons/year; which is below the permitted amount [Refer to Appendix C].

[SC II.2] - **In compliance:** Buckeye demonstrated the distillate throughput in EULOADRACK did not exceed 300,000,000 gallons/year based on 12-month rolling time period as determined at the end of each calendar month. Records submitted covering the last 12 months (from June 2016 to June 2017) showed a maximum throughput of 61,773,972 gallons/year; which is below the permitted amount [Appendix C].

III - Process/Operational Restriction

[SC III.1] - **In compliance:** Buckeye demonstrated compliance with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and XX, as they apply to EULOADRACK. Records showed compliance with: the best demonstrated technologies to minimize VOC emissions, the test methods and procedures and the reporting and recordkeeping procedures. Refer to various documents in appendices (i.e. Trailer Vapor Tightness, Driver Agreement Loading Procedures. in Appendix E, and F).

[SC III.2, 3, 4a to 4d, 6, 9 and 10] - **In compliance:** Buckeye does not operate the petroleum product truck loading rack unless the vapor recovery system or vapor combustion unit is installed and operating properly. Daily readings of the VRU actual operational parameters are recorded by the terminal operator in "preventive maintenance checklists". To assure proper operation of the VRU, the daily readings recorded on the form should be within the listed manufacturer recommended ranges. Examples of the cited checklists are included in Appendix B. Buckeye indicated that they have not had any issues maintaining the parameters within the specified operational restrictions. However, a closer examination of the information provided in the checklists for 6/24/2017 and 2/25/2017 identified that the vacuum pump discharge temperatures is often above the recommended temperature of 150 F. Further information is needed to clarify this concern. AQD will address this issue in future visits.

Buckeye demonstrated that loading of liquid product into gasoline tank trucks is limited to vapor-tight gasoline tank trucks using the procedures cited on 40 CFR 60.502(e). Buckeye utilizes a terminal automatic system (via card lock-out) that prevents cargo tanks that do not have valid cargo tank vapor tightness documentation from loading at the loading rack. In addition, the trucks shall be properly connected to the VRU. According to the "Driver Agreement Loading Procedures, in Appendix F, 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 and are automatically locked-out. Appendix E "Trailer Vapor Tightness Certification" has various examples of certification test results for tank trucks. Appendix E and Appendix F contain documentations and/or records demonstrating compliance with the listed SCs.

[SC III.5] - **In compliance:** Buckeye updated the Malfunction Abatement Plan (MAP) and submitted it to AQD in January 2015 after the installation of a new VRU in year 2013. The MAP is in our records at the District Office. The MAP is consistent with Rule 911(2). The plan includes procedures for maintaining and operating the VRU in a satisfactory manner, during malfunction events. The MAP has a program for corrective action for malfunction events.

[SC III.7, 8 and 11] - **In compliance:** Buckeye demonstrated that each calendar month the vapor collection system, the vapor processing system, and the loading rack are inspected to check for vapor and/or liquid leaks

during the loading of gasoline tanks trucks. 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. A few drops are permitted during disconnection of bottom loading dry breaks and from raising top loading vapor heads. Buckeye keeps electronic records of each detected leak and the source of the leak. Repairs are done promptly and no later than fifteen (15) calendar days after the leak is detected. Leaks inspection results are recorded using Leak Detection and Repair Logs (LDAR) forms. Appendix D includes some records for tests conducted in 2017. Minor problems were identified and promptly repaired.

[SC III.12] - **In compliance:** Buckeye demonstrated they did not allow gasoline to be handled in a manner that would result in vapor release to the atmosphere for extended periods of time by implementing the measures cited under SC III.12 a. to III.12 d. (i.e. minimize gasoline spills, expeditious spill cleaning, use gasket-seals to cover all open containers when not in use, and minimize the amount of gasoline sent to oil/water separators). 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. The cited measures and additional controls are part of Buckeye "Spill Prevention Control and Countermeasure Plan" (SPCCP). The SPCCP was last revised in March 2017. Due to the extensive size of this document, only the Table of Content has been included in Appendix G. The full SPCCP is available to DEQ/AQD upon request., a copy of the SPCCP is within AQD's records.

[SC III.13] - **In compliance:** Buckeye demonstrated they have developed written procedures (SPCCP) for the implementation of the control measures cited in SC III. 12. In addition, the standard loading procedures at the terminal (which are posted and accessible in conspicuous location near the loading rack) includes some of the cited measure dealing with spill prevention. Buckeye indicated that the procedures are also taught as part of the driver training program, all drivers are required to go through the procedures. A picture depicting the Loading Procedures is included in Appendix F.

[SC III.14] - **In compliance:** If Buckeye needs to use the "permitted" portable VCU (PVCU) temporarily (i.e. for emergency situations or maintenance operations), Buckeye will operate EULOADRACK installing the PVCU within the location specified by the ROP (shaded area on the site plan, Appendix 9 of the ROP. At the time of the inspection Buckeye was not using a PVCU but they are aware of the approved location for the portable unit. The PVCU was last used in year 2014.

[SC III.15] - Refer to discussion under FGMACT6B.

IV – Design/Equipment Parameter(s)

[SC IV.1, 2] - **In compliance:** According to SC IV. 1, after June 30, 1981, it is unlawful for a person to load, or allow the loading of, any organic compound that has a true vapor pressure of more than 1.5 psia (at actual conditions) from any stationary vessel into any delivery vessel located at an existing loading facility which has a throughput of 5,000,000 or more gallons of such compounds per year, unless such delivery vessel is filled by a submerged fill pipe. Buckeye has a throughput of more than 5,000,000 gallons of organic compound per year.

For calendar year 2016, Buckeye reported a total throughput of 720,115,890 gallons, (including gasoline and diesel loading). Buckeye uses the bottom-loading method for the loading of organic compounds with the cited vapor pressure condition. In the bottom loading method, a permanent fill pipe is attached to the cargo tank bottom. During most of submerged loading the fill pipe opening is below the liquid surface level. Liquid turbulence is controlled significantly during submerged loading, resulting in much lower vapor generation than encountered during splash loading.

Buckeye demonstrated that the vapor collection system was designed to prevent any total organic compounds vapor collected at one loading rack from passing to another loading rack. Refer to the Loading Procedures in Appendix F.

[SC IV.3 and IV.4] - **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 (18 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.

[SC IV.5] - **In compliance:** Buckeye demonstrated any delivery vessel located at the facility was equipped, maintained or controlled with a device to accomplish complete drainage before the loading device was

disconnected or a device to prevent liquid drainage from the loading device when not in use. Buckeye indicated each loading arm is equipped with a dry-break coupler that is connected to the truck to minimize liquid loss during loading and unloading operations.

[SC VI. 6] - **In compliance:** Buckeye demonstrated that any delivery vessel located at the facility was equipped, maintained or controlled with pressure vacuum relief valves that are vapor tight and set to prevent the emission of displaced organic vapor during the loading of the delivery vessel. The pressure vacuum relief valves on delivery vessels are vapor tight. This is documented through the Trailer Vapor Tightness Certifications and Loading Procedures [Appendix E and Appendix F].

[SC IV. 7] - **In compliance:** Buckeye demonstrated any delivery vessel located at the facility are equipped, maintained or controlled with hatch openings that are kept closed and vapor-tight during the loading of the delivery vessel. Refer to the Trailer Vapor Tightness Certifications and Loading Procedures [Appendix E and Appendix F].

[SC IV. 8] - Not Applicable: Buckeye does not have a flare control system.

V - Testing/Sampling

[SC V.1, 4, 5] - **In compliance:** Buckeye demonstrated compliance with the performance test requirements cited by these conditions. Buckeye submitted tests protocol for AQD approval within the cited timeframes. After AQD approval, Buckeye tested both control units (VRU and the PVCU) in different time periods.

The reports with the test results were timely submitted to AQD. For both control units, the testing results showed VOC emission rates from EULOADRACK in compliance with the VOC permit limits of 10 mg/L. The PVCU was tested on April 23, 2014 with VOC emissions of 0.24 mg/L. The VRU test was conducted on April 22, 2015 with VOC emissions of 1.15 mg/L. Performance test is required once every 5 consecutive years. [Appendix B has the summary of the performance test results].

[SC V. 2] - **In compliance:** In conducting the performance test required by condition SC V.1, Buckeye used the methods and procedures cited in 40 CFR 60, Section 60.8, except that "the three-run requirement of Section 60.8(f) does not apply. The final reports with the details of performance test methods was submitted to AQD and are available in AQD files.

[SC V. 3] - **In compliance:** Before conducting the performance- test cited in SC V.1 and SC V.2, the facility used Method 21 to monitor for leakage of vapor at all potential sources in the terminal's vapor collection system equipment while a gasoline tank truck was being loaded. Buckeye stated that no leakages in excess of 500 ppm (as methane) were detected [Appendix B].

[SC V.6 and V.7] - These conditions will be addressed under FGMACT6B.

VI. Monitoring/Recordkeeping

[SC VI.1] - **In compliance:** Buckeye keeps records of the EULOADRACK throughput volume of each specific petroleum product for each calendar month and each 12-month rolling time period. All records are kept on file for a period of at least five years and are available to the Department upon request. Buckeye keeps electronic records of their production and emissions under "BEST- Buckeye's tank emissions and management system". Copy of records requested for the period from June 2017 to June 2017 are attached in Appendix C.

[SC VI.2, 3, 4, 5, 6, 8, 9] - **In compliance:** Buckeye keeps records of "Truck Vapor Tightness Inspections/Certification" for all the trucks that load product at the terminal. Electronic and hard copies are maintained for at least five years. The vapor tightness documentation includes the information described in 60.505(b). The records are updated at least once per year to reflect current test results as determined by EPA Method 27. Notification to the owner of a non-vapor-tight tank truck is automatic since those tank trucks can't load via the card lock-out system. AQD requested the Truck Vapor Tightness Certification records and they were available for inspection. Copies of some the tests conducted in year 2017 were collected and are attached in Appendix E. The copies of each record are an exact duplicate image of the original paper record with certifying signatures.

[SC VI. 7] - **In compliance:** Buckeye keeps records of each monthly leak inspections required under Section 60.502(j). The records are kept electronically and are available for Inspection. As indicated earlier in this report, leaks inspection results are recorded using Leak Detection and Repair Logs (LDAR) forms. The forms include the information required by 60.505 (c): date of the inspection, the findings, leak determination method, the

corrective action & date, and the inspector name. Examples for year 2017 inspections have been included in Appendix D.

VII. Reporting - Evaluated under ROP common requirements

VIII. Stack/Vent Restriction (s) - In compliance - There have not been changes to the dimensions of the VRU stack identified in the ROP. No visible emissions were observed.

FGMACT6B

Area source gasoline distribution bulk terminal with gasoline storage tanks and gasoline loading racks emitting hazardous air pollutants (HAP) subject to 40 CFR 63 Subpart BBBBBB (MACT6B)

Emission Units: EULOADRACK, EUTANK12, EUTANK14, EUTANK15, EUTANK16, EUTANK17, EUTANK18, EUTANK20, EUTANK22, EUTANK23 & EUTANK56

Pollution Control Equipment: Internal floating roofs, VRU, or a PVCU whose location is restricted to the area shaded on the site plan in Appendix 9 of the ROP.

The U.S. EPA has not delegated authority to the State of Michigan to implement and enforce the requirements of MACT6B as they apply to the Gasoline Distribution Bulk Terminals. However, the applicable requirements from MACT6B have been incorporated into the ROP. Buckeye is under the obligation to demonstrate to the U.S. EPA that they are in compliance with the emission limitations and management practices; which include fulfilling the design and operational parameters, monitoring/recordkeeping and reporting requirements cited in the ROP.

As part of this inspection, the AQD examined MACT6B requirements and the ROP special conditions for FGMACT6B as they apply to Buckeye. Here are some observations:

Buckeye Terminal started its operations before January 10, 2008; therefore, it is an existing affected source that needed to show compliance with the requirements of MACT6B by January 10, 2011 by submitting a "Notification of Compliance Status" (NOCS) to the U.S EPA.

AQD received copies of the applicable notifications submitted to the US EPA as required under 40 CFR 63.11093. The following notifications were submitted by BP Products North America, who was Buckeye's previous owners:

- Initial Notification dated May 8, 2008; received by AQD on May 14, 2008.

The Initial Notification included the elements dictated by 63.9 (b) (2)(i) through (v). A summary table listed the emission units (EUs) subject to MACT6B with details of the size, design and method of pollution control.

- A NOCS with signed certification by the Responsible Official dated January 6, 2011 was received by AQD on January 10, 2011.

Among other things, in the NOCS the company selected the method they would be using to demonstrate compliance with the reduction of TOC emissions to the limits established by the permit limits. The company selected to conduct "performance test" on the vapor processing and collection system using the test methods and procedures identified in 60.503 (NSPS – Subpart XX). A performance test on the VRU was conducted on August 19, 2010. This was evaluated as part of EULOADRACK

A facility conducting a performance test shall also comply with the provisions cited under 63.11092(b) which requires the installation of a Continuous Monitoring System (CMS) by January 10, 2011. In the NOCS the company selected an alternative monitoring allowed by the provisions in 63.11092 (b)(1)(i) B). Instead of installing a Continuous Emission Monitoring System (CEMS) capable of measuring organic compound concentration in the exhaust air, they selected monitoring the vacuum level of the carbon adsorption device using a pressure transmitter installed in the vacuum pump suction line. An operating parameter of 26 inches of mercury (as the lowest value) was set by the VRU manufacturer. The monitoring and inspection plan, which is a requirement under this option; was also submitted with the NOCS. The plan included site specific operating parameter conditions that would be considered malfunctions of the carbon adsorption system.

An updated table with the list of storage vessels, capacity, type of roof, and a citation of the regulatory standards for tank management practices (i.e. Part 63, Subpart WW) was included as part of the NOCS, and three (3) tanks were identified as to be regulated under NSPS, Subpart Kb.

ROP Special Conditions for FGMACT6B

I. Emission Limits - Refer to EULOADRACK

II. Material Limits - Not Applicable

III. Process and Operational Restrictions – The ROP does not list any special conditions under this section.

IV. Design/Equipment Parameters

[SC IV.1a and b] – These conditions refer to the management practices, design features and operational conditions to control VOCs in tanks with capacities greater than or equal to 75 cubic meters storing VOL. The applicable requirements are cited under Part 63 Subpart 6B by referencing Part 60, Subpart Kb requirements.

All tanks in this flexible group are equipped with a fix roof and a IFR and/or EFR. The floating roof design configurations, seals, vents, openings, operation, and inspection frequency requirements are dictated by the applicable regulations. In the semiannual reports submitted in compliance with Subpart 6B, Buckeye certified compliance with Part 63, Subpart WW (Standard for Storage Vessel –Control Level 2). Subpart 6B references the use of Subpart WW for the air emission controls of the storage tanks subject to option 2(d) in Table 1 of Subpart 6B. A cursory revision of Subpart WW was conducted and it looks like the floating roof design, the operational restrictions and the inspections requirements cited in Subpart WW are similar to the ones cited in the Kb regulations. The exceptions seem to be the additional reporting requirements under Subpart WW.

[SC IV.2] – This condition relates to requirements under 63.11087 which refer to the control requirements of Part 60, Subpart Kb, which have been already evaluated.

V. Testing/Sampling - (Evaluating SCV.6 and SCV.7 cited under EULOADINGRACK)

[SC V. 6] - Buckeye terminal is subject to the emission standards cited in item 1(b) of Table 2 of Subpart 6B which requires VOC emissions less than or equal to 80 mg/L loaded from the vapor processing unit. As indicated earlier, Buckeye had demonstrated compliance with this limit by performance testing of the VRU exhaust stack, according to paragraph (a)(1) of 63.11092 and using test methods and procedures in 60.503; except that reading of 500 ppm is used to determine level of leaks to be repaired.

[SCV.7] – According to Subpart 6B, under 63.11092(a)(2), Buckeye may submit a statement by a responsible official certifying the compliance status of EULOADRACK in lieu of the test required under paragraph (a)(1) of 63.11092. However, the request to use this alternative must be submitted to the U.S. EPA for approval.

VI. Monitoring/Recordkeeping

[SC VI.1 to 5] - These special conditions refer to the equipment leak inspections requirements under Subpart 6B, specified in section 63.11089 (a) to (d) for bulk gasoline terminals. These requirements are equivalent to the monthly leak inspections and reporting listed under 60.502(e) and 60.505(b) of Part 60, Subpart XX. Compliance has been evaluated under EUOADRACK.

VII. Reporting

AQD receives copies of the semiannual reporting of monitoring and deviations, as well as semiannual excess emission reports that are sent to EPA. The reports are submitted in compliance with 63.11095 and are received by the March 15 deadline for reporting period July 1 to December 31 and by September 15 for reporting period January 1 to June 30.

In the last two semiannual reports for period 7/1/2016 to 12/31/2016 and 1/1/2017 to 6/30/2017, there were no reports of equipment leaks, non-vapor-tight gasoline cargo tank, or malfunctions. However, the facility reported CMS's downtime for both periods, but the values were below 5% of the total operating time.

During the file review conducted in preparation for this inspection, AQD noticed that in the last two semiannual reports for MACT6B Buckeye reported the usage of CEMS to monitor the VRU operation. In all previous semiannual reports since the NOCS submitted on 1/10/2011 Buckeye had used the alternative parameter monitoring (i.e. monitoring the vacuum level of the carbon adsorption device) to monitor VRU operations. AQD contacted Kimberly Trostel, (Buckeye) to verify the date of this modification. AQD suspected that the change had occurred after the installation of the new VRU, in 2015. Ms. Trostel confirmed the assumption. She said that the CEMS is measuring instantaneous, 1 hour rolling and 6 hour rolling VOC concentration in the exhaust gas of the VRU. The VOC data is tracked automatically and reviewed daily by an automated system. Ms. Trostel would check if Buckeye has updated the NOCS. If not, she will submit an update to the EPA with copy to AQD.

FGGASNSPS

Emissions from three petroleum products storage tanks, each equipped with an internal floating roof including landing (3 events /year /tank) and cleanings.

Emission Units: EUTANK12, EUTANK22, & EUTANK56

Pollution Control Equipment: Internal floating Roof (IFR)

I. Emission Limits - Not applicable

II. Material Limits - Not applicable

III. Process/Operational Restrictions

[SC III.1] – **In compliance:** Buckeye seems to comply with the provisions specified in 40 CFR Part 60 Subparts A and Kb, as they apply to FGGASNSPS. The aspects evaluated during this inspection include those cited under 60.112b (Standards of roof configurations and roof fitting for VOC emission controls); 60.113b (Testing and procedures); 60.115b (Reporting and recordkeeping requirements) and 60.116b (Monitoring). Buckeye's compliance with the cited sections of Subpart Kb is detailed in the following sections.

IV. Design and Equipment Parameters

[SC IV.1] – **In compliance:** All the above listed storage vessels are equipped and maintained with a floating roof which rests upon, and is supported, by the liquid being contained, and has seals to reduce the space between the cover roof and the vessel wall.

Buckeye keeps electronic records listing the design features for each tank installed at the terminal. All three (3) IFR tanks have a primary seal (mechanical shoe) and a secondary seal (rim-mounted wiper seal). Refer to Appendix A for a one-page summary titled "Tank Identification and Physical Characteristics".

[SC IV.2] – **In compliance:** Based on the last annual "through-the-hatch" tank inspections conducted in 2017 for tanks 12, 22, and 56 (see Appendix I) there were no seals detached, no holes, tears, or other openings visible in the seal fabric; and there were no "nonfunctional" openings in the tanks.

[SC IV.3] – **In Compliance:** All tanks grouped under FGGASNSPS are equipped with covers fitted with gaskets that completely cover all openings (refer to Appendix A) except for those which are no larger than necessary to allow safe clearance for the floating roof. Buckeye indicated that the openings are always covered except when in actual use.

Refer to Appendix I for details and pictures of recent repairs conducted after out-of-service inspection of tank 56 and top-side seals inspections of tanks 12, and 22.

V. Testing/Sampling

Not Applicable

VI. Monitoring/Recordkeeping

Monitoring records and inspection reports demonstrating compliance with Special Conditions VI and VII cited below, include: annual in-service IFR seal "Through-the Hatch" inspection forms, and "OOS Tank Inspection Reports". As indicated earlier, examples of the cited records for the most recent inspections for tanks Nos. 12., 22 and 56 have been included in Appendix I.

After the installation of the of the control equipment (fixed roof and internal floating roof) in the tanks, Buckeye has demonstrated compliance with the following conditions, by monitoring and keeping inspection records for a period of five years:

[SC VI.1a] - **In compliance:** Buckeye conducts annual inspection of the IFR following this procedure: After opening the access hatch on the fixed roof, using an intrinsically safe flashlight the operators inspect the floating roof, control fittings, primary seal, and secondary seal prior to filling the storage vessel with VOL. They check for corrosion, detached seals, product on floating roof, or holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or any defects in the internal floating roof, or both, they are repaired before filling the storage vessel.

[SC VI.1b] – **In compliance:** Buckeye's operators conduct "Through-the Hatch" inspections at least once every 12 months. They visually inspect: the IFR the primary seal and the secondary seal through manholes and roof hatches on the fixed roof. If the IFR is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the items are repaired or the tank is emptied and removed from service within 45 days. If a failure that is detected during inspections cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, Buckeye is aware that they have to ask AQD for a 30-day extension in the inspection report required in §60.115b(a) (3).

[SC VI.1c and d] – **Unknown:** Tanks 12, 22 and 56 are equipped with a double-seal system.; a mechanical shoe (primary seal) and rim mounted wiper seal (secondary seal). Under Subpart Kb, there are two different schemes dictating the frequencies of visual inspections for tanks with a double-seal system. Buckeye seems to have selected the option of inspecting the tanks once a year when the tanks are in-service following the procedure

indicated in the previous section. Under this option they are required to conduct a more detailed inspection with the tanks out-of-service (OOS) at intervals no greater than 10 years. During the OOS the tanks are emptied and degassed.

AQD requested a storage tank inspection schedule. A summary table was provided by Buckeye and has been included in Appendix H. After examining the schedule, it is unclear if Buckeye is following the frequency of inspections dictated by 60.113b(a)(2) and 60.113b(a)(3)(ii). Additional information is needed to determine compliance with this special condition.

[SC VI.1e] – **In compliance:** This condition requires Buckeye to adhere to the following procedure: Buckeye shall notify AQD in writing at least 30 days prior to the filling or refilling of each storage vessel for which an inspection is required by their planned schedule to offer AQD the opportunity of having an observer present. If the OOS inspection is not planned, and Buckeye could not have known about the inspection 30 days in advance or refilling the tank, then Buckeye shall notify AQD at least 7 days prior to the refilling of the storage vessel. Notification shall be made by telephone immediately followed by written documentation, or by express mail so that it is received by AQD at least 7 days prior to the refilling.

According to the tank maintenance schedule provided by Buckeye, there hasn't been any OOS inspection for tanks 12, 22, and 56 within the last year period. Consequently, AQD has not received recent notifications of planned/scheduled OOS tanks inspections for the cited tanks. The next OOS inspections are planned for year 2024

[SC VI.2] – **In compliance:** Buckeye keeps electronic records that show the dimensions and the capacities of each storage vessel. The records are submitted annually as back up information with the Michigan Emission Report System (MAERS) reports. The records are kept as long as the storage vessel remains in operation. Refer to Appendix A.

[SC VI.3] – **In compliance:** Buckeye maintains a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure (TVP) of that VOL during the respective storage period. Records are kept in their electronic database. Refer to Appendix A

[SC VI.4] – **In compliance:** According to this condition, Buckeye shall notify AQD within 30 days when the maximum TVP of the liquid exceeds the respective maximum TVP values for each volume range: 0.75 psia maximum for vessels equal to or greater than 950 bbl., and 4.0 psia for vessels between 476 - 950 bbl. This condition is not applicable to storage vessels less than 476 bbl.

The volumes of the NSPS tanks are as follows: Tank 12 (76,600 bbl.), Tank 22 (91,900 bbl.), and Tank 56 (32,259 bbl.). The records submitted by Buckeye with the MAERS report for year 2016 indicated the TVP of the liquid stored in the cited tanks have been maintained below 0.75 psia (maximum required for volumes equal or above 950 bbl.) as it is required by this special condition.

VII. Reporting

[SC VII. 1, 2 and 3] – **In compliance:** These conditions have been evaluated earlier in this report, under "ROP Common Requirements"

[SC VII.4.a.(1) to VII.4.a.(4)] - Buckeye keeps records for at least five years and provides copies of the reports to AQD. The condition applicable to closed vent systems (i.e. keeping records for the life of the control equipment) is not applicable to Buckeye.

[SC VII.4.a.(1)] – **In compliance:** Our records indicate that Tanks 12, 22 and 56 were installed at the terminal in 1994, 1992 and 1993 respectively. The tanks have always been identified by Buckeye as regulated under NSPS, Subpart Kb. As such, it is assumed that after the installation of the control equipment in the tanks (fixed roof and internal floating roof), Buckeye provided a notification to AQD indicating the date of initial startup of the tanks within 15 days after the startup, including a report describing the control equipment and a certification that the control equipment met the applicable requirements under 60.112b(a)(1) and 60.113b(a)(1)] of Subpart Kb. However, we couldn't find an official documentation of Buckeye's initial notification in our record files, exempt for the one included within MACT, Subpart BBBBBB.

[SC VII.4.a.(2)] - **In compliance:** Buckeye keeps records of each annual inspection performed as required by the applicable requirements of Subpart Kb. Each record identifies the storage vessel on which the inspection was performed and contains the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings). Refer to Appendix I.

[SC VII.4.a.(3)] - **In compliance:** According to the records, after completing the annual visual inspections of tanks 12, 22 and 56 in 2017, Buckeye did not find any defects or imperfections in the tank control system that they deemed necessary to report to AQD.

[SC VII.4.a.(4)] - **Not applicable** for the evaluated period: According to this condition Buckeye shall provide a report to AQD within 30 days of an out-of-service (OOS) inspection if a defective condition as described in SC VI.1.b has been detected on any of the component of the control equipment (seals, internal floating roof, and fittings) in the inspected tank. The report must identify the storage vessel, the nature and suspected reasons of the defects, the list of each repair made and the dates of the repairs.

As cited under SC IV.2 and SC IV.3, there have not been recent OOS inspections.

FGGASTANKS

Description:

Emissions from nine petroleum products storage tanks each equipped with an internal floating roof including landing emissions (3/year/tank) and cleanings.

Emission Units: EUTANK14, EUTANK15, EUTANK16, EUTANK17, EUTANK18, EUTANK20, EUTANK23, EUTANK24 & EUTANK25

Pollution Control Equipment: Internal floating roof

[SC I, II, III] – Not applicable

IV. Design/Equipment Parameter(s)

[SC IV.1 to IV.3] - **In compliance** - All tanks grouped into FGASTANKS are equipped and maintained with floating roof which rests upon, and are supported, by the liquid being contained and has a closure seal or seals to reduce the space between the cover roof and the vessel wall. For demonstration of compliance with these conditions refer to the "Physical Characteristics - Tanks Summary" in Appendix A, and the examples of annual in-service internal floating roof seal "through-the-hatch inspections" for year 2017 collected in Appendix H.

According to the inspection reports in Appendix H, the seal or any seal fabric did not have visible holes, tears or other malfunction openings.

Buckeye indicated that all emission units within FGGASTANKS have covers that completely cover all openings except for those which are no larger than necessary to allow safe clearance for the floating roof. The openings are covered at all times except when in actual use.

IV. Testing/Sampling – Not applicable

VI. Monitoring/Recordkeeping

[SC VI.1 and 2] - **In compliance:** Buckeye monitors and keeps records of true vapor pressure of all organic compounds stored at actual storage conditions, for a period of 5 years. (Appendix A). Buckeye keeps readily accessible records that show the dimensions and the storage capacity of each storage vessel. The records are kept electronically in the terminal database and are provided as background information with the yearly submittal of the emission report (MAERS). (See Appendix A).

VII. Reporting

[SC VII. 1, 2 and 3] – **In compliance:** These conditions have been evaluated earlier in this report under "ROP Common Requirements"

EUAIRSTRIPPER

Run-off water treatment system consisting of an air stripper

Pollution Control Equipment:

No controls and no exhaust stacks

I. Emission Limits - In Compliance - The VOC limit for EUAIRSTRIPPER is 20 lbs. / month (in a calendar month). See section III and VI below for compliance analysis.

II. Material Limits - Not applicable

III. Process/Operational Restrictions

[SC III.1] Buckeye is in compliance with the provisions of Rule 290 as they apply to EUAIRSTRIPPER. The total uncontrolled emissions of all listed pollutants are reported as "zero" pounds.

[IV and IV] - Design/Equipment Parameters and Testing/Sampling - Not applicable

VI. Monitoring/Recordkeeping

[SC VI.1] – **In compliance:** Buckeye maintains for a period of five years the monthly records of total VOC concentration determined using the standard MDEQ groundwater analytical scans for VOCs. AQD requested the analytical results for sampling conducted during the recent months for 2017. Buckeye provided the records for the months of April and June of 2017. The records were acceptable and the lab certified that the results conform to the most current standards and Quality Assurance procedures.

Buckeye has not requested changes in the sampling frequency since the renewal of the ROP in 2016. Any request for a change shall be submitted to the AQD District Supervisor for review and approval.

[SC VI.2 and VI.3] – **In compliance:** On a monthly basis, Buckeye monitors and records in a satisfactory manner, the flow rate, the total VOC concentration, the Benzene concentration, and the Naphthalene concentration of the air stripper influent and effluent water streams. AQD requested monthly record for year 2017. Records corresponding to the months of February and April were handed out during the inspection. The monthly form filled out by the operator shows the daily rate of treated water. All required calculations are completed electronically in accordance with the ROP - Appendix 7; and using the results of the lab analysis and the water flowrate. The results show zero emissions.

VII. Reporting

[SC VII. 1, 2 and 3] – **In compliance:** These conditions have been evaluated earlier in this report under "ROP Common Requirements"

FGRULE290

Emission Unit: EUBUTANE

In Compliance- Buckeye operates a 117,905-gallon horizontal pressurized butane storage tank which was installed in 2012. The butane storage tank is exempt from the requirements to obtain a Permit to Install (PTI) under Michigan Air Pollution Control Rule 290 (Rule 290), which exempts an emission unit with limited emissions.

The Butane tank is subject to the emission limits and monitoring and recordkeeping conditions cited under Sections I and Section VI of ROP for FGRULE290. A document demonstrating the applicability of Rule 290 to EUBUTANE substantiating compliance with the cited conditions, was submitted by Buckeye via email on 8/9/2017. AQD accepted the demonstration. A copy of the document will be saved in our records files. The information provided has been included in Appendix K.

8. MAERS AUDIT

MAERS for emission year 2016 was timely submitted by Buckeye on 3/9/2017. The report was evaluated by AQD during the month of May. The submittal appeared to be accurate with no apparent errors and the reported emissions correlate with the change in throughputs. AQD staff accepted/passed the report on 5/31/2017 without modifications to the original report.

[SC VII.4.a.(3)] - **In compliance**: According to the records, after completing the annual visual inspections of tanks 12, 22 and 56 in 2017, Buckeye did not find any defects or imperfections in the tank control system that they deemed necessary to report to AQD.

[SC VII.4.a.(4)] - **Not applicable** for the evaluated period: According to this condition Buckeye shall provide a report to AQD within 30 days of an out-of-service (OOS) inspection if a defective condition as described in SC VI.1.b has been detected on any of the component of the control equipment (seals, internal floating roof, and fittings) in the inspected tank. The report must identify the storage vessel, the nature and suspected reasons of the defects, the list of each repair made and the dates of the repairs.

As cited under SC IV.2 and SC IV.3, there have not been recent OOS inspections.

FGGASTANKS

Description:

Emissions from nine petroleum products storage tanks each equipped with an internal floating roof including landing emissions (3/year/tank) and cleanings.

Emission Units: EUTANK14, EUTANK15, EUTANK16, EUTANK17, EUTANK18, EUTANK20, EUTANK23, EUTANK24 & EUTANK25

Pollution Control Equipment: Internal floating roof

[SC I, II, III] – **Not applicable**

IV. Design/Equipment Parameter(s)

[SC IV.1 to IV.3] - **In compliance** - All tanks grouped into FGASTANKS are equipped and maintained with floating roof which rests upon, and are supported, by the liquid being contained and has a closure seal or seals to reduce the space between the cover roof and the vessel wall. For demonstration of compliance with these conditions refer to the "Physical Characteristics - Tanks Summary" in Appendix A, and the examples of annual in-service internal floating roof seal "through-the-hatch inspections" for year 2017 collected in Appendix H.

According to the inspection reports in Appendix H, the seal or any seal fabric did not have visible holes, tears or other malfunction openings.

Buckeye indicated that all emission units within FGGASTANKS have covers that completely cover all openings except for those which are no larger than necessary to allow safe clearance for the floating roof. The openings are covered at all times except when in actual use.

IV. Testing/Sampling – **Not applicable**

VI. Monitoring/Recordkeeping

[SC VI.1 and 2] - **In compliance**: Buckeye monitors and keeps records of true vapor pressure of all organic compounds stored at actual storage conditions, for a period of 5 years. (Appendix A). Buckeye keeps readily accessible records that show the dimensions and the storage capacity of each storage vessel. The records are kept electronically in the terminal database and are provided as background information with the yearly submittal of the emission report (MAERS). (See Appendix A).

VII. Reporting

[SC VII. 1, 2 and 3] – **In compliance**: These conditions have been evaluated earlier in this report under "ROP Common Requirements"

EUAIRSTRIPPER

Run-off water treatment system consisting of an air stripper

Pollution Control Equipment:

No controls and no exhaust stacks

I. Emission Limits - In Compliance - The VOC limit for EUAIRSTRIPPER is 20 lbs. / month (in a calendar month) . See section III and VI below for compliance analysis.

II. Material Limits - Not applicable

III. Process/Operational Restrictions

[SC III.1] Buckeye is in compliance with the provisions of Rule 290 as they apply to EUAIRSTRIPPER. The total uncontrolled emissions of all listed pollutants are reported as "zero" pounds.

[IV and IV] - Design/Equipment Parameters and Testing/Sampling - Not applicable

VI. Monitoring/Recordkeeping

[SC VI.1] – **In compliance:** Buckeye maintains for a period of five years the monthly records of total VOC concentration determined using the standard MDEQ groundwater analytical scans for VOCs. AQD requested the analytical results for sampling conducted during the recent months for 2017. Buckeye provided the records for the months of April and June of 2017. The records were acceptable and the lab certified that the results conform to the most current standards and Quality Assurance procedures.

Buckeye has not requested changes in the sampling frequency since the renewal of the ROP in 2016. Any request for a change shall be submitted to the AQD District Supervisor for review and approval.

[SC VI.2 and VI.3] – **In compliance:** On a monthly basis, Buckeye monitors and records in a satisfactory manner, the flow rate, the total VOC concentration, the Benzene concentration, and the Naphthalene concentration of the air stripper influent and effluent water streams. AQD requested monthly record for year 2017. Records corresponding to the months of February and April were handed out during the inspection. The monthly form filled out by the operator shows the daily rate of treated water. All required calculations are completed electronically in accordance with the ROP - Appendix 7; and using the results of the lab analysis and the water flowrate. The results show zero emissions.

VII. Reporting

[SC VII. 1, 2 and 3] – **In compliance:** These conditions have been evaluated earlier in this report under "ROP Common Requirements"

FGRULE290

Emission Unit: EUBUTANE

In Compliance- Buckeye operates a 117,905-gallon horizontal pressurized butane storage tank which was installed in 2012. The butane storage tank is exempt from the requirements to obtain a Permit to Install (PTI) under Michigan Air Pollution Control Rule 290 (Rule 290), which exempts an emission unit with limited emissions.

The Butane tank is subject to the emission limits and monitoring and recordkeeping conditions cited under Sections I and Section VI of ROP for FGRULE290. A document demonstrating the applicability of Rule 290 to EUBUTANE substantiating compliance with the cited conditions, was submitted by Buckeye via email on 8/9/2017. AQD accepted the demonstration. A copy of the document will be saved in our records files. The information provided has been included in Appendix K.

8. MAERS AUDIT

MAERS for emission year 2016 was timely submitted by Buckeye on 3/9/2017. The report was evaluated by AQD during the month of May. The submittal appeared to be accurate with no apparent errors and the reported emissions correlate with the change in throughputs. AQD staff accepted/passed the report on 5/31/2017 without modifications to the original report.

For details of the emissions and MAERS report evaluation, please refer to the compliance activity report in our records files.

9. FINAL COMPLIANCE DETERMINATION

Based on the 2017 annual inspection, Buckeye Terminals, LLC at River Rouge was found to be operating in compliance with the applicable state and federal air regulations, with the following exception

It is unknown if Buckeye is in compliance with conditions VI.1.c and VI.1.d. for FGGASNSPS. The conditions require an inspection frequency dictated by NSPS, Subpart Kb. The requirements are cited under 60.113b(a)(3) which are applicable to storage tanks equipped with double-seal system, and FGGASNSPS (i.e. Tanks No. 12, 22 and 56) have primary and secondary seals. Further information is needed to determine compliance with the cited conditions.

Follow-up Items: AQD requested an updated list of the exempt equipment as well as a demonstration of the applicability of Rule 201 exemptions as required per Rule 278a.

NAME Affandoval

DATE 9/14/2017

SUPERVISOR JK