

NDS06
MHWLA

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

N050640968

FACILITY: TAYLOR EAST TERMINAL - BUCKEYE (WAS ATLAS OIL CO)		SRN / ID: N0506
LOCATION: 24501 ECORSE RD, TAYLOR		DISTRICT: Detroit
CITY: TAYLOR		COUNTY: WAYNE
CONTACT:		ACTIVITY DATE: 08/03/2017
STAFF: Stephen Weis	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Compliance inspection of the Buckeye Terminals Taylor East facility. The Buckeye facility is scheduled for inspection in FY 2017.		
RESOLVED COMPLAINTS:		

Location:

Buckeye Terminals, LLC – Taylor East Terminal (SRN N0506)
24501 Ecorse Road
Taylor 48180

Date of Activity:

Thursday, August 3, 2017

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Dennis Coleman, Terminal Specialist – Buckeye Detroit and River Rouge Terminals
Chad Masserant, Terminal Operator – Buckeye Taylor Terminals
DeAundrey Leath – Buckeye Taylor Terminals

Purpose of Activity

A self-initiated inspection of the Buckeye Terminals, LLC – Taylor East Terminal (hereinafter "Buckeye Taylor East", or "Buckeye Taylor") was conducted on Thursday, August 3, 2017. The Buckeye Taylor East facility was on my list of sources targeted for an inspection during FY 2017. The purpose of this inspection was to determine compliance of operations at the Buckeye Taylor facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control), applicable Federal standards, and any applicable permits.

Facility Description

The Buckeye Taylor East facility is a liquid fuel storage and distribution facility, also known as a bulk terminal. The facility was sold to Buckeye by Atlas Oil in January 2006. Atlas Oil, a fuel supply company, still operates offices in the building closest to Ecorse Road; they lease the office space from Buckeye. The Buckeye Taylor East facility is located along the south side of Ecorse Road, just west of Telegraph Rd. The facility is bounded to the south by the Norfolk Southern railroad track and associated right of way; to the east by an open piece of property; to the north by some commercial properties and a park (Atlas Park), with a residential neighborhood immediately behind the commercial properties and the park; and to the west by the Buckeye Terminals, LLC – Taylor West facility. The neighboring Buckeye Taylor West facility (24801 Ecorse Road, SRN B9036) is a Jet-A fuel terminal, providing fuel to Detroit Wayne County Metropolitan Airport. The nearest residences are located approximately 120 yards to the north; 225 yards to the south; and 350 yards to the west of the facility.

Operations at the Buckeye Taylor East facility primarily consist of a tank farm and a loading rack. The tank farm includes six tanks that are used to store and distribute various blends of gasoline, diesel fuel (low and high sulfur), and ethanol. There are some additional, smaller tanks that contain fuel additives, with one tank containing red dye to differentiate off-road and on-road diesel fuel.

The following are the details regarding the six fuel storage tanks in the tank farm:

- Tank 1 is the largest storage tank, having a storage capacity of 3,558,030 gallons. The tank is currently

used to store unleaded gasoline. It is a steel tank with a fixed roof on top (coned), and an internal floating roof featuring a liquid mounted primary rim seal and a rim mounted secondary rim seal. Tank 1 was installed on October 24, 1973.

- Tank 2 has a storage capacity of 1,670,382 gallons, and is currently used to store ethanol. It is a steel tank with a fixed roof on top (coned), and an internal floating roof equipped with a mechanical shoe liquid primary rim seal. Tank 2 was installed on March 16, 1971.
- Tank 3 has a storage capacity of 1,583,900 gallons. It is currently used to store premium grade unleaded gasoline. It is a steel tank with a geodesic dome-type roof on top, and an internal floating roof featuring vapor mounted primary seal and a weather shield secondary seal. Tank 3 was installed on August 18, 1954.
- Tank 4 has a storage capacity of 1,583,900 gallons, and is currently used to store diesel fuel. It is a steel tank with a geodesic dome-type roof on top, and an internal floating roof equipped with a vapor mounted primary seal. Tank 4 was installed on August 18, 1954.
- Tank 5 has a storage capacity of 1,211,196 gallons, and is currently used to store diesel fuel. It is a steel tank with a geodesic dome-type roof on top, and an internal floating roof equipped with a vapor mounted primary seal and a weather shield secondary seal. Tank 5 was installed on August 17, 1954.
- Tank 6 has a storage capacity of 1,211,196 gallons, and is currently used to store sub octane grade unleaded gasoline. It is a steel tank with a geodesic dome-type roof on top, and an internal floating roof equipped with a vapor mounted primary seal and a weather shield secondary seal. Tank 6 was installed on August 17, 1954.

Most of the fuel received at the facility (over 99%) comes from a Buckeye pipeline. The fuel products that arrive via the Buckeye pipeline come from the Husky Energy Refinery in Lima, Ohio. The fuel products are piped from Lima to Toledo, OH, to Woodhaven, MI, to Detroit, MI, and on to the Taylor terminals. The fuel product is typically piped to the site in a 10,000 barrel batch. When 10,000 barrels have been received at Buckeye Taylor East, the flow is then routed to another terminal in what is known as a "pipeline cut".

Fuel is distributed to delivery vessels from the facility's storage tanks via a loading rack. The loading rack at Buckeye Taylor East, which was installed in 1954, is a two lane terminal loading rack that can dispense 500-600 gallons per minute of fuel per loading arm. The loading rack is equipped with a vapor collection system and an enclosed flare, or vapor combustion unit (VCU), as the VOC emission control device. I have been told during past site visits (and the information was confirmed during this site visit) that when a truck arrives at the facility to take on a load of fuel, the driver must key in their identifying customer information to gain access to the terminal. When the truck is driven into the loading rack, the driver hooks the scully hose (part of the fuel delivery system) from the loading rack to their tanker truck; this triggers the ignitor to light the pilot light on the flare, and the flare comes on line. The VCU is in standby mode when fuel is not being loaded through the loading rack. If the pilot does not light, then the truck is locked out the system as fuel is not permitted to flow. This, in turn, triggers a call to the operator to check on the flare.

A new VCU was installed at the Buckeye Taylor East facility since my last visit to the site in 2013. The new VCU is a John Zink Enclosed Flame VCU. Buckeye applied for and received a Permit to Install modification (PTI No. 249-03A) to address the installation and operation of the new VCU. Per the PTI application, Buckeye provided that "the replacement VCU has the same control efficiency as the existing unit, and therefore will not create an increase in VOC or HAP emissions. There will be no operational changes associated with the modification, however the stack dimensions in the Terminal's existing PTI will need to be updated." The stack/vent information in the EURACK Emission Unit in PTI No. 249-03A was changed to reflect the stack dimensions associated with the new VCU – a 96 inch stack diameter, and a stack height of 35 feet above grade. According to information from the manufacturer that was included with the PTI application, the VCU is guaranteed to emit VOC at a maximum emission rate of 10 mg per liter of fuel product loaded (the permit limits the loading rack to a VOC emission rate of 30 mg per liter of fuel product loaded).

Facility Operating Schedule

Being a bulk fuel distribution terminal, the Buckeye Taylor East facility operates 7 days a week. According to the Buckeye staff that I spoke with during the site visit, there are currently two staff employed at Buckeye Taylor East. There are approximately 100 persons employed at the Atlas Oil offices adjacent to the Buckeye terminal.

Inspection Narrative

I arrived at the facility at 11:10am. At this facility, visitors check in at the Atlas Oil offices. I signed in, and I was escorted to the Buckeye Taylor East terminal office, located in the southeast corner of the building that houses the Atlas Oil offices. I was met by Dennis Coleman, Chad Masserant, and DeAundrey Leath. Kim Trostel from Buckeye's office in Lima, OH was also serving as a resource during the inspection via e-mail. I began by asking about the operations at the facility. I reviewed the information from the report associated with my last visit to the facility to see if anything has changed in the time since. The Buckeye staff present agreed that the descriptions of the process, operations and equipment are still accurate. The only update was to the number of Buckeye staff working at the site; that number is now two staff.

I then discussed PTI No. 249-03A with Buckeye staff. We discussed the permit special conditions (SCs) to evaluate the Buckeye Taylor East facility's compliance. Dennis had some monthly fuel throughput and emissions information prepared for me to help in demonstrating compliance with some of the permit conditions. This information included 12 month rolling fuel usage reports for gasoline and diesel, both for the reporting period from July 2016 through July 2017, and a facility wide emission summary for the same reporting period (titled "Buckeye Air Emissions Inventory"). A corrected version of the Buckeye Air Emissions Inventory – Emission Summary report covering the time period from August 2016 through July 2017 was provided to me by Kim Trostel via an e-mail on August 31. This information is attached to this report for reference.

As we reviewed the permit conditions for EURACK, FGIFRTANKS and FGFACILITY, Buckeye staff described the ways in which they track compliance. I would present the requirements of the permit conditions, and Buckeye staff would describe what they do at the facility to meet the requirement and, for the conditions that required records, they showed me the records that are kept. For SC III.2 in EURACKS, I was shown the equivalent to the malfunction abatement plan (MAP) that is required by the condition; the facility refers to the document as the facility operations manual. I reviewed it with Buckeye staff, and we able to find all of the required elements from SC III.2 a-c in the manual. We discussed the Michigan Administrative Rule 627 (Rule 627) requirements, and I was provided with a copy of the paperwork associated with the tanker truck pressure/vacuum test results associated with Rule 627. We also discussed the requirements associated with storage tank number 1 (EUTANK1), and I was provided with a copy of the most recent tank inspection form for that tank.

A more detailed discussion regarding the compliance of the Buckeye Taylor East facility's compliance with this permit can be found in the next section of this report.

After reviewing the permit and going over records, Chad took me out to get a closer look at storage tank number 3 (EUTANK3). We climbed the staircase to the top of the tank, and we were looked in the access hatch at the top to observe the inside of the tank, the floating roof and the seal. The tank as a listed height of 50 feet, 4 inches. According to the gage at the ground level, the tank was filled to 14 feet, 3 inches at the time. Chad pointed out the roof, and the mechanical shoe seal (consisting of rubber seals and springs). He described how the roof moves with the level of fuel in the tank. I was only able to detect a light and intermittent odor of gasoline when looking through the hatch.

After returning from viewing the storage tank, we returned to the facility office. After reviewing the items that needed follow up with Buckeye staff, I left the facility at 12:40pm.

Permits/Orders/Other

Permits

The Buckeye Taylor East facility is currently subject to the provisions of **Permit to Install No. 249-03A**, which was issued on January 5, 2016. As mentioned in the last section, this PTI was applied for and issued to address the installation of the new VCU at the facility and to update the exhaust parameters in EURACK to reflect those associated with the new VCU. A copy of Permit to Install No. 249-03A is attached for reference.

The following is a summary of the compliance status of the operations at the Buckeye Taylor East facility with the terms and conditions of PTI No. 249-03A:

For EU-RACK

Special Conditions 1.1 through 1.5 (Emission Limits): Buckeye demonstrated **compliance** with the emission limits in these conditions via the information presented in the Buckeye Air Emissions Inventory document that

was provided to by Kim Trostel. A similar document that covers a calendar year reporting period is typically included with the facility's annual MAERS submittal. On page 5 of the document is a table titled "Breakdown of Loading Operations". This table provides the total gallons of each fuel loaded via the loading rack during the reporting period, and the resulting emissions before and after air emission controls. The reported controlled VOC emissions associated with loading ethanol, diesel and gasoline are well below the permitted limits in Special Conditions (SCs) I.1 through I.4. Kim sent an e-mail during the site visit that estimates the hourly emissions from ethanol loading.

Compliance with the emission limit in Special Condition (SC) I.5 is demonstrated via a performance test of the flare, which is required in SC I.5 to be performed every five years, and in accordance with the testing requirements found in 40 CFR Part 60, Subparts XX and BBBB. A performance test was conducted on May 19, 2016 on the newly installed VCU. The test was performed in accordance with applicable requirements. The testing met and exceeded the minimum fuel loading requirement of 300,000 liters of gasoline during a 6 hour test period in Subpart XX; 129,125 gallons, or 466,738 liters of fuel was loading during the test. This test measured VOC emissions from the loading rack VCU of 1.4 mg/liters (mg/L) of fuel loaded, which is **in compliance** with the 30mg/L limit.

Special Conditions II.1 through II.4 (Material Limits): The records kept by Buckeye, summarized and presented in the Buckeye Air Emissions Inventory documents that were provided to me, demonstrate that the facility is **in compliance** with these material throughput conditions. For the 12 month period from August 2016 through July 2017, Buckeye reported 8,582,282 gallons of gasoline throughput (vs. 250MM gallon limit), 14,567,344 gallons of diesel throughput (vs. 73.5MM gallon limit), and 1,720,387 gallons of ethanol (vs. 42.6MM gallon limit). SC II.1 also limits ethanol to 62,000 gallons per hour. Buckeye described the maximum amount of fuel that can be dispensed via the loading rack in an hour to me during the site visit. It equated to around 40,000 gallons per hour from the entire rack, so the facility cannot conceivably reach the 62,000 gallons per hour limit put forth in SC II.1.

Special Condition III.1 (Process/Operational Restrictions): The facility is **in compliance** with Michigan Administrative Rules 609 and 627. The "delivery vessels", or tanker trucks belonging to Buckeye's customers, referenced in Rule 609 have the appropriate vapor control systems in place. All of the delivery vessels doing business with Buckeye at their terminal are required to perform annual tests of the vapor control systems on their vehicles, using EPA Method 27, and keep documentation of the results of these tests. I was provided with a copy of the paperwork associated with a tanker truck pressure/vacuum test results associated with Rule 627, which is attached to this report. I was told during my last site visit that Buckeye receives a fax from each delivery vessel that picks up fuel at the Taylor East facility; this fax contains the Method 27 vapor certification for that delivery vessel. The information for each vessel is entered and maintained in a company-wide database called the Terminal Automation System. If a vessel does not have a certification on file with Buckeye, or if more than a year has passed since the vessel's last certification, then the vessel is denied entry into the Buckeye Taylor East facility at the facility gate. This information was confirmed as still being valid during this site visit.

Special Condition III.2: The facility is **in compliance** with this condition. Buckeye staff provided me with the facility's Malfunction Abatement Plan documents to review. The information is contained in a thick black binder, and it includes an operating manual and corrective actions for the loading rack and its associated components, as well as the VCU. The document includes the information listed in paragraphs a through c of this permit condition. I was also provided with the most recent entry from the facility's Vapor Control Unit Preventative Maintenance (PM) Vapor Combustion Unit (VCU) Quarterly Checklist. A maintenance inspection of the VCU was performed on July 19, 2017. A copy of this information is attached to this report.

Special Condition IV.1 (Design/Equipment Parameters): The facility is **in compliance** with this condition, which requires that the facility maintain a vapor tight collection system associated with loading rack activities. The facility has been keeping track of the operation of their vapor collection system in accordance with the equipment leak inspection requirements of 40 CFR 63.11095(a)(3). A copy of the most recent 40 CFR Part 63 Subpart BBBB – Semi-Annual Report, dated July 27, 2017, is attached for reference.

Special Condition IV.2: The facility is **in compliance** with the condition regarding the vapor balance systems of delivery vessels. I was told that facility staff and the tanker truck drivers that use the loading rack follow proper procedures to ensure that connections between the tanker trucks and the loading rack, as well as hatches on the trucks, are vapor-tight during fuel transfer/loading operations.

Special Condition V.1 (Testing/Sampling): The facility is **in compliance** with this condition, which requires that the VOC emission rate from the VCU be tested. As stated earlier in this report, the most recent performance test

was conducted on May 19, 2016 on the newly installed VCU. This test measured VOC emissions from the loading rack VCU of 1.4 mg/liters (mg/L) of fuel loaded, which is in compliance with the 30mg/L limit.

Special Conditions VI.1 and VI.2 (Monitoring/Recordkeeping): The facility is **in compliance** with these two conditions. Records of all fuel throughputs associated with the facility's loading rack are maintained on a monthly and 12 month rolling basis.

Special Condition VI.3: The facility is **in compliance** with this condition. The facility has been operating the flare at all times that fuel is being dispensed, regardless of the type, so there is currently no need to keep the records associated with this condition specific to time periods when the flare is not operating. Also, as mentioned as part of the discussion for SC II.1, the loading rack is not capable of dispensing 62,000 gallons in an hour.

Special Condition VI.4: The facility is **in compliance** with this condition. For VI.4.a, as mentioned for the last condition, the flare is operated for all fuel dispensing. For VI.4.b, c and d, the facility tracks and reports this information in the "Buckeye Air Emissions Inventory" documents.

Special Condition VI.5: The facility is **in compliance** with this condition. For VI.5.a, this information corresponds to the Method 27 certifications for delivery vessels that was referenced earlier in this report. For VI.5.b, records of parts replacements, repairs and maintenance for the VCU are kept in accordance with the facility's MAP. For VI.5.c, I was told that any flare malfunctions or failures are tracked in the company's internal system as a work-order log.

Special Condition VIII.1 (Stack/Vent Restrictions): The stack parameters were updated as part of this PTI to reflect the parameters associated with the new VCU. It is assumed that the facility is complying with this requirement.

For FG-IFRTANKS

Special Condition I.1 (Emission Limits): The facility is **in compliance** with this condition. The facility keeps of throughputs and VOC emission estimates for each of the internal floating roof tanks (Tanks 1-6). The report for the time period from August 2016 through July 2017 shows that VOC emissions from these tanks was estimated at 3.8276 tons (vs. the permit limit of 8.3 tons per year).

Special Condition III.1 (Process/Operational Restrictions): The facility is **in compliance** with this condition. Tanks 2 and 4 are not used to store gasoline.

Special Condition III.2: The facility is **in compliance** with this condition. Tanks 1-6 meet the requirements of Michigan Administrative Rule 604.

Special Condition III.3: The facility is **in compliance** with this condition. Tanks 1, 3, 5 and 6 meet the requirements of Michigan Administrative Rule 607 when gasoline being loaded.

Special Condition III.4: The facility is **in compliance** with this condition. Tank 1 is in compliance with 40 CFR Part 60, Subpart K.

Special Condition IV.1 (Design/Equipment Parameters): The facility is **in compliance** with this condition. The Buckeye staff present reviewed the table associated with this condition, and they confirmed that the tank and associated seal descriptions provided for each of the storage tanks are accurate.

Special Conditions VI.1 and VI.4 (Monitoring/Recordkeeping): The facility is **in compliance** with these conditions. I was told during my last inspection that the NSPS Subpart K inspections are performed on all of the tanks (1-6), not just Tank 1. For this visit, I was provided with a copy of a report titled "Monthly In-Service, Vertical, Aboveground, Atmospheric Tank Inspection Form" associated with an inspection for Tank 1 that was conducted on July 12, 2017. The copy of this sheet is attached to this report for reference.

Special Conditions VI.2 and VI.3: The facility is **in compliance** with the recordkeeping requirements in these conditions. Records are kept of the fuel throughputs and emissions associated with each storage tank. This information can be found in the attached Buckeye Air Emissions Inventory sheets.

FGFACILITY

Special Conditions I.1 through I.3 (Emission Limits): The facility is **in compliance** with these conditions. Records

are kept of facility-wide emission estimates for total VOCs, individual HAPs and total HAPs. According to the information provided in the Buckeye Air Emissions Inventory sheets, the facility-wide VOC emissions for the 12 month rolling time period from August 2016 through July 2017 was 4.4391 tons, and the total HAP emissions for that same time period was 0.3346 tons.

Special Conditions II.1 through III.3 (Material Limits): The facility is in **compliance** with these conditions. Records are kept of the throughputs of all fuels distributed at the Buckeye Taylor East facility. The throughput information can be found in the Buckeye Air Emissions Inventory sheets.

Special Conditions VI.1 and VI.2 (Monitoring/Recordkeeping): The facility is in **compliance** with these conditions. Records of facility-wide emission calculations and fuel throughputs for each type of fuel handled at the facility are kept and maintained. This information can also be found in the Buckeye Air Emissions Inventory sheets.

Special Condition IX.1 (Other Requirements): The facility submits the reports required by 40 CFR Part 63, Subpart BBBBBB. The reports, which are submitted semi-annually, state the facility's compliance with the requirements of the Subpart. DEQ-AQD does not have delegated authority for Subpart BBBBBB. As such, while we receive and review the information that the facility submits relating to Subpart BBBBBB, the ultimate authority in terms of determining the Buckeye Taylor East facility's compliance with Subpart BBBBBB rests with EPA.

Applicable regulations

As referenced in the permit discussion, operations at the Buckeye Taylor East facility are subject to State regulations, specifically Administrative Rules 604, 607, 609, 627 and 702.

The facility is also subject to Federal regulations. 40 CFR Part 60, Subpart K (Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973 and Prior to May 19, 1978) applies to Tank 1. As mentioned in the permit discussion, Buckeye currently performs the Subpart K inspections and monitoring activities on all of the storage tanks, not just Tank 1. All of the other fuel storage tanks in the tank farm (Tanks 2, 3, 4, 5 and 6) pre-date the 40 CFR Part 60 New Source Performance Standards (NSPS). I have attached an Emission Unit summary table from the Buckeye Taylor East facility's MAERS report. Based on this information, Tank 2 was installed on March 16, 1971, Tanks 3 and 4 were installed on August 18, 1954, and Tanks 5 and 6 were installed on August 17, 1954.

The facility is not subject to the gasoline terminal NSPS, 40 CFR Part 60, Subpart XX (Standards of Performance for Bulk Gasoline Terminals) due to the installation date of the loading rack. The 30 mg/L VOC emission limit for the loading rack that was put forth in PTI No. 249-03 did use the Subpart XX VOC limit of 35 mg/L as a basis. This limit was carried over to the current PTI (No. 249-03A).

The facility is subject to the area source MACT, 40 CFR Part 63, Subpart BBBBBB (National Emission Standards for Hazardous Air Pollutants: Gasoline Distribution Bulk Terminals, Bulk Plants and Pipeline Facilities). As part of the compliance demonstration with the provisions of this Subpart, Buckeye submits semi-annual compliance reports to the AQD-Detroit Office. A copy of the most recent report, dated July 27, 2017, is attached as reference. These reports have indicated that the Buckeye Taylor East facility is in compliance with Subpart BBBBBB, but, as mentioned previously in this report, EPA is the delegated authority to determine the facility's compliance with this Subpart.

Compliance Determination

Based upon the results of the August 3, 2017 site visit and subsequent records review, the Buckeye Taylor East facility appears to be in compliance with all applicable rules, regulations and Orders.

Attachments to this report: a copy the Buckeye Air Emissions Inventory information for the period from August 2016 through July 2017; a copy of PTI No. 249-03A; a copy of some Rule 627 gasoline tank truck pressure/vacuum certifications; a copy of a report titled "Monthly In-Service, Vertical, Aboveground, Atmospheric Tank Inspection Form" associated with an inspection for Tank 1 that was conducted on July 12, 2017; a copy of the most recent 40 CFR Part 63 Subpart BBBBBB semi-annual report; an e-mail from Buckeye that provides a rough estimate of hourly emissions from ethanol loading; a copy of the most recent entry from the facility's Vapor Control Unit Preventative Maintenance (PM) Vapor Combustion Unit (VCU) Quarterly Checklist; an Emission Unit summary table from the facility's most recent MAERS report.

NAME Steve Was

DATE 9/15/17

SUPERVISOR JK

