

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B903657818

FACILITY: BUCKEYE PIPE LINE HOLDINGS, L.P.- TAYLOR TERMINAL		SRN / ID: B9036
LOCATION: 24801 ECORSE RD, TAYLOR		DISTRICT: Detroit
CITY: TAYLOR		COUNTY: WAYNE
CONTACT: Kimberly Trostel , Senior Air Compliance Specialist		ACTIVITY DATE: 03/12/2021
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: FY 2021 Targeted Inspection - For details about this inspection refer to report CA_B903657818		
RESOLVED COMPLAINTS:		

SRN: B9036**SOURCE:** Buckeye Pipe Line Holdings, L.P. Taylor Terminal (BTT)**ADDRESS:** 24801 Ecorse Road, Michigan 48217**INSPECTION DATE:** 3/12/2021**INSPECTOR:** Nazaret Sandoval - MDEQ, Air Quality Division**BUCKEYE PERSONNEL PRESENT:**

Richard A. Zeestraten – Terminal Operator

MAIN COMPLIANCE CONTACT: Kimberly Trostel, Sr. Specialist - Air Compliance
ktrostel@buckeye.com)**1 - FACILITY DESCRIPTION**

The Buckeye Terminal at Taylor (BTT) is a petroleum products storage and distribution facility. Petroleum products are received via pipeline and pumped into tanks for storage in the tank farm for later distribution to the delivery vessels at the loading rack. There are seven (7) vertical product storage tanks (T-1 to T-7), six of them are for the storage of jet kerosene, also called jet fuel, and the smallest tank (T-6) is used for the storage of transmix (mixture of different petroleum distillates). The jet fuel tanks range in capacities from 1.50 to 2.35 million gallons. The transmix tank has a shell capacity of 407,371 gallons.

Fuel additives are loaded into storage tanks via trucks. There are four (4) horizontal additive tanks (T-13 to T-16), T-13 and T-14 each with a shell capacity of 2,030 gallons, T-15 is a 5,903 gallon-tank and T-16 is a 320-gallon tank that was used for the storage of red dye when diesel was loaded at the terminal. The additives off-loading area is located near the office on the east side.

The terminal has six bays (inlets for trucks to stay under product loading) and four loading arms/hoses (piping or hose arrangement for filling in a truck). The first bay, near the office, is only used for incoming trucks transporting additives. The loading arms are identified from 1 to 4, from north to south. Loading arm No. 2 was dedicated to gasoline distribution but it has not been used since 2006 when the gasoline distribution was discontinued. Since then, the facility is primarily utilized as a jet fuel distribution terminal with flexibility to load a limited amount of transmix, which is transported to refineries for processing. Loading arms No. 1 and No. 3 are used for the distribution of jet fuel and loading arm No. 4 is used for transmix loading.

On the farthest southeast corner of the site there are four (4) smaller vertical 'slop' tanks labeled as T-8 to T-11, that could be used for the storage of mixed product. Each tank has a capacity of 14,768 gallons. Near the slop tanks there is a small 264-gallon holding tank (T-12) used for the temporary storage of jet fuel waste that is collected after jet fuel is tested when it comes into the facility. Similarly, T-17 is a 564-gallon tank that collects the waste from the "White Bucket Test". This test is a quality control test for the detection of significant amounts of water and particulates in the Jet-fuel product loaded to the trucks. Both tanks, T-12 and T-17 are frequently pumped back to T-6.

Finally, T-18 is a 1,980 gallon-contact tank for oil/water separation. T-18 is located at tank farm's southwest corner, between T-5 and T-6.

2 - PERMIT BACKGROUND AND REGULATORY ANALYSIS

According to AQD records the original terminal was owned by British Petroleum Exploration & Oil, Inc. (BP) and operations began in 1953. The original terminal had four loading bays (three loading arms). In 1980 the loading rack was modified to add two more bays, for a total of four loading arms. The permit of 1980 also approved the installation of a vapor collection system, a vapor recovery unit (VRU), the conversion of the loading racks from top loading to bottom loading and the retrofitting of tanker trucks to bottom loading. It appears as if the cited modifications were in response to compliance with new regulations that went into effect in the early 1980s which required new standards to be implemented for the control of emissions from bulk gasoline terminals. In addition, the records show that six (6) storage tanks installed in the 1950s had fixed roofs and some of them were later retrofitted adding internal floating roofs (IFR). The roof modifications occurred at separate times for each tank. Tanks No. 2 and No. 4 were retrofitted in the early 1980s and tank No. 6 in 1992. Tank No. 7 seems to be one of the newest tanks for fuel storage. It was installed in 1992 with a fixed roof and IFR.

All the above cited modifications were permitted by the Wayne County Department of Environment, Air Quality Management Division (Wayne County). Thereafter, on 11/14/1995, BP prepared and submitted a permit application to opt-out from Title V. The application, which grouped all previous permits, was originally evaluated by both agencies, the Wayne County and the Michigan Department of Natural Resources – Air Quality Division (AQD); however, the state AQD was the agency that issued the opt-out Permit to Install (PTI). In 1998 the Wayne County permits were all consolidated into two AQD permits identified as PTI 558-95 (Loading Rack and Vapor Recovery Unit-VRU) and PTI 559-95 (11 petroleum products storage tanks and four horizontal additive tanks). Both PTIs were issued on 1/14/1998.

In year 2000 Buckeye Tanks Terminal Company, LP bought the terminal and all permits issued to BP were transferred to that company. A letter in AQD files, dated 11/19/2004, indicates that effective October 12, 2001 the name and ownership of the Taylor Terminal changed to Buckeye Pipe Line Holdings, LP.

In 2017, BTT requested the removal of the Internal Floating Roof (IFR) from tank No. 4 and submitted a permit application to AQD. On 3/22/2017 AQD issued PTI 15-17 to include the modification of tank No. 4. Tank No. 4 was permitted to operate as a vertical fixed roof tank (VFRT) to store less volatile petroleum products. PTI 558-95 and PTI 559-95 were voided because all equipment was covered by PTI 15-17.

In 2019, BTT submitted a permit application to allow limited uncontrolled loading of transmix. BTT also requested to relax the regulatory requirements applicable to Tank 7 when the tank stored distillate. PTI 15-17A was approved on 2/1/2019.

Buckeye owns a petroleum product terminal (Taylor East) adjacent to BTT. In January 2021, Buckeye submitted a permit application (App No. 2021-0018) to request the combination of both terminals into one single stationary source. When the inspection of March 12, 2021 was conducted, the permit application was under review by AQD.

State Permit:

The terminal is an existing opt-out source regulated under PTI 15-17A. BTT accepted material limits for the loading of gasoline and distillate to restrict the facility's potential to emit below the major source threshold (100 tons of VOC per year) and opt-out of the Title V program (Renewable Operating Permit Program - ROP).

As indicated earlier in this report, gasoline and ethanol fuel truck loading operations ceased in year 2006 and BTT shut down the Vapor Recovery Unit (VRU). In a letter dated December 1, 2005 from BTT to AQD, BTT explained that the VRU was not needed for loading jet fuel, transmix or distillate fuels at the truck loading rack.

BTT also explained that when gasoline distribution is not occurring at the terminal, the facility is not subject to Rule 608 because the definition of gasoline per Rule 107 (a) does not apply to products such as jet-fuel or transmix. Having a vapor pressure greater than 1.5 psia, the quantity of transmix loaded would be maintained below 5 million gallons per year by BTT so that the VRU would not be required for the control of VOC emissions pursuant to Rule 609 (which has been the case). The letter of December 1, 2005 also explains that with the shift in business the facility would still maintain the status of an ROP "opt-out source" for VOCs and minor source for HAPs. BTT estimated the potential "uncontrolled" truck rack VOC emissions when only Jet-fuel and Transmix were loaded. The results showed that the estimated VOC emission from the loading rack declined substantially from the permit limits set within PTI 558-95 for the loading of gasoline. As part of the transition to distillate service, BTT has converted some of the internal floating roof tanks (IFRTs) to operate as VFRTs. However, for added flexibility, BTT kept all the applicable provisions and requirements for gasoline handling/operations in the current permit, PTI 15-17A. If BTT resumes gasoline truck loading in the future, BTT shall install a new vapor control unit and shall retrofit the storage tanks with the appropriate seal system that meets regulatory requirements.

Federal Regulations:

NSPS - New Source Performance Standards (NSPS)

NSPS applies to new and/or modified sources. Some of the NSPS that could potentially apply to the storage tanks in this terminal (K, Ka, Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels) are not applicable because this is an existing facility with storage tanks installed prior to 1973. In addition, the changes/modification in product stored and/or tanks configurations that have occurred after 1972 did not qualify as "modifications" per the definition given by the cited NSPS regulations.

This facility has the capability of loading gasoline and the loading racks that deliver the product into the tank trucks could potentially be subject to the provisions of NSPS - Subpart XX (Bulk Gasoline Terminals). Records in AQD files indicate that the loading rack was installed in the mid-fifties and it was modified in 1980 to add two more bays and a new VRU. The permit obtained for these modifications, issued on 6/10/1980, also included the conversion of top loading racks to bottom loading racks and the installation of a vapor collection system. The project was completed in September 1980. Therefore, since the installation date was prior to 12/17/1980 the facility is not subject to subpart XX.

NESHAP - National Emission Standards for Hazardous Air Pollutants

These standards have been established in 40 CFR 63 to control the emissions of HAPs. NESHAP establish Maximum Achievable Control Technology (MACT) standards for specific types of equipment at qualifying facilities. MACT regulations typically apply to facilities that are major sources for HAPs. BTT is a synthetic minor source of hazardous air pollutant (HAP) emissions because the potential emissions of any single HAP regulated by the Clean

Air Act, Section 112 is less than 10 tons per year and the potential emissions for all HAPs combined are less than 25 tons per year. There are MACT standard applicable to this type of sources, which are identified as “area source of HAPs”, that could potentially apply to BTT, as described below.

Our records show that as part of the permit application submitted to AQD in 2017 when tank No. 4 was modified, BTT’s consultants conducted an analysis of specific MACT standards to determine their applicability to BTT operations. The following MACTs were evaluated: Subparts R, EEEE, BBBB, OO, WW and CCCCC. The outcome of their evaluation indicated that except for Subpart BBBB, none of the listed MACTs were found to be applicable to BTT.

AQD has not accepted delegation to enforce and/or implement Subpart BBBB. Therefore, the regulation was not evaluated in this inspection and will not be discussed further.

3 - COMPLAINTS/COMPLIANCE HISTORY

The last inspection conducted by AQD at this facility was on 9/10/2018. Our records show that there are no outstanding violations for this facility since the last inspection. Similarly, there have not been citizen complaints received by the AQD’s Detroit Office related to fallout or odors attributed to the Buckeye Terminal at Taylor (BTT).

4 - INSPECTION DESCRIPTION

On 3/12/2021, I arrived at BTT at about 10:30 AM to conduct a facility inspection. I was greeted by the terminal operator, Mr. Richard Zeestraten. He was present during the inspection initial/closure meetings and during the terminal tour.

Mr. Michael Barret (Woodhaven Terminal) and Mr. Chad Masserant (Taylor East Terminal) answered some questions I had in relation to the adjacent Taylor Terminal.

I stated the purpose of the inspection, which was 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 requirements and special provisions of permit to install, PTI 15-17A.

The facility records were requested prior to the inspection in an email sent to Kimberly Trostel (Buckeye) on 12/2/2020. I asked for the terminal loading rates, emission reports, tanks updates, jet fuel certificate of analysis, tanks trucks pressure/vacuum test certifications forms, and tank maintenance schedules. The throughputs and emission records were obtained from the central corporate system “BEST” (Buckeye Emission System) which supports all Buckeye’s terminals, and that information was provided via email by Kimberly Trostel on 1/6/2021. The operational records were handed out by BTT’s terminal operator during the inspection meeting.

Here is a summary of the records provided by Buckeye as part of the inspection conducted on 3/12/2021:

- 1.-Terminal lay-out drawing with the location of storage tanks and the loading rack
- 2.- Air emissions inventory records for reporting period from December 2019 to November 2020 from the Taylor Terminal Database (BTTDB)
- 3.- Jet fuel certificate of analysis dated 12/31/2020

- 4.- BP Safety Data Sheet (SDS) for Jet Fuel (Jet A)
- 5.- Dow Chemical Certificate of Analysis for Jet Fuel Additive dated 1/12/2021
- 6.- Monthly True Vapor Pressure (TVP) calculations for transmix loading
- 7.- Samples of the certification forms for the tank-trucks pressure/vacuum tests
- 8.-Tank's inspections schedule

The special conditions and the applicable requirements cited on PTI 15-17A were examined. After our discussion and record collection, we toured the plant. We started at the loading rack. There wasn't any truck loading while I was inspecting this area. I observed the Jet-Fuel Filter Banks, which is the filtration system that eliminates water and particles from the Jet-Fuel before it is loaded to the tanker trucks. This process is a closed system and there is no venting to the atmosphere. The VRU, which lies on the south side of the loading rack area, was not connected to the system. We continued the inspection by walking along the road path that surrounds the tank farm. The tanks and the associated above-ground piping appeared to be in good condition. There were no unpleasant odors detected at the facility premises. During the walk through the tank farm I asked the operator to identify the tanks that were in service and their content. I noticed that all the tanks had labels showing the tank ID, tank diameter, tank height, last inspection date, last cleaning date, safe fill height and safe fill volume in barrels. I took pictures of the labels for each tank to have a record for AQD files. There have not been changes in the product stored in the tanks since the last inspection. All tanks, except for tank No. 6 – the transmix tank – were storing jet fuel and all tanks were in-service. The four cone-roof vertical tanks No. 8, 9, 10 and 11, located at the east corner of the property nearby T- 2 and by the Buckeye Pipeline Manifold were out of service. These tanks used to store ethanol when gasoline was delivered. T-12, the small tank near the slop tanks which holds the wasted jet-fuel from sampling, was in-service. The horizontal tanks T- 13 to T-16 are located near the facility entrance, east of the office building. T-13 and T-14 were in-service with jet-fuel additive. T-15, also used for the storage of jet fuel additives, was empty and out of service. T-16, used for the storage of red dye when diesel was loaded, was empty. T- 17 is a small tank located by the transmix loading rack. This tank is used for the disposal of the waste collected from the "white bucket test". The white bucket is a simple but reliable test done by the tanker truck drivers to determine the cleanliness quality of the jet-fuel loaded (i.e., detection of significant amounts of water and particulates). The waste held in T-17 is pumped to Tank No. 6 (the transmix tank). T-18, near the SW pond is a contact tank part of the water/oil separator system. For details about the tanks, its capacities and products stored, refer to the attached summary table.

We returned to the office to wrap-up the inspection. I left the facility around 12:30 PM.

5 - COMPLIANCE EVALUATION - PTI 15-17A

This evaluation covers records provided by BTT for the period from December 2019 to November 2020. The collected records were examined to evaluate compliance with permit limits. For convenience, the permit conditions are summarized below.

EULOADRACK - 6 bay truck loading rack

The loading of Jet Fuel doesn't require VRU for the control of VOC emissions. Transmix throughput is recorded to demonstrate compliance with the 5 million gallons/year limit without controls.

EMISSION LIMITS (SC I. 1 to I.4) –In Compliance

Pollutant	Limit	Time Period / Operating Scenario	Permit Condition	In Compliance: YES, NO or NA
I.1. VOC	80.0 mg/liter of organic compounds loaded ^a	Monthly average	SC V.1 – VRU Testing	NA- The VRU is disconnected. True Vapor Pressure for Transmix loading is recorded (see III.1)
I.2. VOC	80 mg/liter of gasoline loaded ^b	Monthly average	SC V.1 – VRU Testing	NA –the VRU is disconnected. There has not been gasoline loading since 2006.
I.3. VOC	2.28 mg/liter of distillate loaded	Monthly average	SC V.1 – VRU Testing	NA – The VRU is disconnected
I.4. VOC	54.19 tpy	12-month rolling time period as determined at the end of each calendar month	SC VI.4	YES - 5.18 tpy (highest emission reported at the end of January 2020)

MATERIAL LIMITS (SC II.1 and II.2) – In Compliance

Material	Limit	Time Period / Operating Scenario	Highest Recorded Values	In Compliance: YES, NO or NA
II.1 gasoline	146 million gallons per year	12-month rolling time period as determined at the end of each calendar month.	gasoline loading has been discontinued since 2006	N/A
II.2 distillate (reported as Jet Kerosene)	300 million gallons per year	12-month rolling time period as determined at the end of each calendar month.	45,571,534 MM gallons (end of February 2020)	YES

PROCESS/OPERATIONAL RESTRICTION**SC III.1 – In Compliance**

SC III.1 applies to the loading of transmix (organic compounds having true vapor pressure of more than 1.5 psia) and specifies, that if the loading of transmix is 5,000,000 gallons per year or more, the emissions must be controlled and the operational restrictions and conditions listed on SC III.1a. to 1d. apply to the delivery vessels and to the vapor control system, to assure an adequate operation.

The current operations at BTT include the handling of transmix via pipeline and truck-loading. The operator of the terminal keeps Reid Vapor Pressure (RVP) records of the loaded products to estimate the True Vapor Pressure (TVP). If the calculated TVP is above 1.5 psia then the batch is accounted for and the quantity is added to the loading total for transmix. For the evaluated period, depending on the batch of product that the facility receives from the pipeline and the temperature (winter or summer) of the product, the RVP varied from 3 psia to above 6 psia and the calculated True Vapor Pressure (TVP) varied from 1.51 psia to 2.77 psi. The records for transmix loading show that the highest 12-month rolling throughput handled at the loading racks during the evaluated period was 3,546,777 gallons per year, reported at the end of January 2020.

SC III. 2 and III.3 – N/A

The listed conditions and provisions apply to gasoline loading. The loading of uncontrolled gasoline is limited to less than 1,000,000 gallons per year. The operational restrictions and conditions listed on SC III. 2a to 2d. apply to the loading of delivery vessels with gasoline. The records show that the facility has discontinued gasoline loading.

TESTING/SAMPLING (SC V.1) & MONITORING/RECORDKEEPING (SC VI.3) – Not Applicable

Verification of VOC emission rates from the loading rack via the VRU by stack testing may be required. Verification of emission rates includes the submittal of a complete report of the test results (SC V.1).

The permittee shall keep in a satisfactory manner, a written record of all carbon replacement, repairs and maintenance to the Vapor Recovery Unit (SC VI.3).

The VRU has been disconnected after the cessation of gasoline loading in 2006.

MONITORING/RECORDKEEPING**SC VI.1, SC VI.2, SC VI.4 – In Compliance**

The permittee shall complete all required calculations and keep records of the EULOADRACK throughput of each specific petroleum product for each calendar month and 12-month rolling time-period in a satisfactory manner. The VOC emission rates shall be calculated in accordance with permit requirements. The permittee shall keep the records on file and make them available to AQD upon request. Records shall be maintained on file for a period of five years.

Records are maintained adequately and were provided as requested by AQD. All records are attached.

FGFACILITY

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment and exempt equipment.

EMISSION LIMIT(S) (SC I.1, SC I.2) – In Compliance

Pollutant	Limit in TPY	Time Period / Operating Scenario	Reported emissions (*)	In Compliance: YES, NO or NA
I.1 VOC	88.5	12-month rolling time period as determined at the end of each calendar month.	5.47 TPY	YES
I.2. HAPs	7.85	12-month rolling time period as determined at the end of each calendar month.	0.18 TPY	YES

(*) For compliance evaluation AQD used the VOC and HAP values reported in the Emission Summary Table for reporting period Dec. 2020 to Nov. 2021.

DESIGN/EQUIPMENT PARAMETERS (SC IV.1) – In Compliance

All organic compound having a true vapor pressure of more than 1.5 psia, but less than 11 psia, at actual storage conditions, shall be stored in tanks that are equipped and maintained with a floating cover and seals to reduce the space between the cover or roof edge and the tank wall. The seal or any fabric shall not have visible holes, tears, or other nonfunctional openings.

The only tank that stores compounds with TVP above 1.5 psia is T -6 (the transmix tank). Routine annual in-service “Through the hatch” inspections are conducted on T-6, by the operators, to assure that the roof and the seals are maintained adequately. In addition, per API 653, the facility requires to perform P

MONITORING/RECORDKEEPING (SC VI.1 to SC VI.3) – In Compliance

SC VI.1 – BTT uses their corporate database system to record throughputs and to estimate the VOC and HAP emission rates from each one of the emission units conforming FGFACILITY. All required calculations are completed for the previous calendar month, by the last day of the calendar month. Records are maintained on file for a period of five years.

SC VI.2 - BTT calculates the VOC emission rates from FGFACILITY monthly, for the preceding 12-month rolling time period. The VOC records for FGFACILITY are maintained adequately and were provided as requested by AQD. All VOC records for the evaluated period are attached.

SC VI.3 - BTT calculates the aggregate HAPs emission rates from FGFACILITY monthly, for the preceding 12-month rolling time period, using a method accepted by AQD District Office. The HAP records for FGFACILITY are maintained adequately and were provided as requested by AQD. All HAP records for the evaluated period are attached.

6 - MAERS 2020

MAERS 2020 was reviewed and audited. The facility passed the audit. For audit details, refer to the audit report in AQD files.

7 - COMPLIANCE STATUS

Based on the inspection conducted on 3/12/2021, Buckeye Pipe Line Holdings, L.P. Taylor Terminal (BTT) was found to be operating in substantial compliance with the applicable state and federal air regulations, and the conditions of PTI 15-17A.

As it was indicated in the opening sections of this inspection report, Buckeye submitted a permit application to AQD requesting the consolidation of BTT (the Jet-fuel Terminal) and the Taylor East Terminal into one single stationary source which will be regulated under one single permit. In the permit application, submitted in January 2021, Buckeye addressed all the permit conditions in PTI 15-17A that required modifications to reflect the cessation of gasoline storage and loading at the Jet-Fuel Terminal.

In the next inspection cycle, the Jet-fuel Terminal in Taylor will be evaluated as part of one consolidated stationary source identified under SRN N0506.

NAME Nazaret Sandoval

DATE 5/11/2021

SUPERVISOR JK