



Louisville Metro Air Pollution Control District  
850 Barret Avenue  
Louisville, Kentucky 40204-1745



**XX Month 2016**

## **Federally Enforceable District Origin Operating Permit Statement of Basis**

**Company:** Buckeye Terminals, LLC

**Plant Location:** 1500 Southwestern Parkway, Louisville, Kentucky 40211

**Date Application Received:** 11/16/2006

**Date of Draft Permit:** 01 February 2016

**District Engineer:** Narathip Chitradon

**Permit No:** O-0084-16-F

**Plant ID:** 0084

**SIC Code:** 4226

**NAICS:** 493190

### **Introduction:**

This permit will be issued pursuant to District Regulation 2.17- *Federally Enforceable District Origin Operating Permits*. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), 1 hr and 8 hr ozone (O<sub>3</sub>), and particulate matter less than 10 microns (PM<sub>10</sub>); and is a non-attainment area for the 1997 standard for particulate matter less than 2.5 microns (PM<sub>2.5</sub>), unclassifiable for the 2012 standard for particulate matter less than 2.5 microns (PM<sub>2.5</sub>) and partial non-attainment area for sulfur dioxide (SO<sub>2</sub>).

### **Application Type/Permit Activity:**

Initial Issuance

Permit Revision

Administrative

Minor

Significant

Permit Renewal

### **Compliance Summary:**

Compliance certification signed

Compliance schedule included

Source is out of compliance

Source is operating in compliance

**I. Source Information**

1. **Product Description:** Buckeye Terminals, LLC is engaged in the distribution of gasoline products.
2. **Process Description:** The terminal is a bulk storage facility where shipments are transported to the terminal via pipeline, barge, and truck. Gasoline products that are received by each system are routed to the desired storage tank(s) through a fixed arrangement of pipes and valves. Various gasoline products are withdrawn from the storage tank(s) and routed to a terminal truck loading rack. It is also possible for the terminal to withdraw product from its storage tank(s) to its barge operation area.
3. **Site Determination:** There are no other facilities that are contiguous or adjacent and under common control.
4. **Emission Unit Summary:**

Emission Unit	Equipment Description
U1	Multiple storage tanks containing various gasoline products
U2	One (1) terminal truck loading rack
U3	One (1) barge loading and unloading operation

5. **Fugitive Sources:** The facility uses a vapor recovery unit (VRU) and a backup portable vapor combustion unit (PVCU) for the truck loading rack under Emission Unit U2. The remaining emission points are fugitive sources.
6. **Permit Revisions:**

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
Initial	0069-97-F	04/22/1997	03/16/1997	Initial	Entire Permit	Initial Permit Issuance
R1	0069-97-F-R1	04/05/2000	03/05/2000	Significant	General Conditions [Pages 2-4]	General Conditions #4, #11, #12, and #13 revised; new conditions added #13 and #14 and name change

Revision No.	Permit No.	Issue Date	Public Notice Date	Change Type	Change Scope	Description
R2	0069-97-F-R2	05/20/2002	04/14/2002	Significant & permit reissuance	Additional Conditions [Pages 6-18]	Added in applicable regulations and conditions
NA	O-0084-16-F	xx/xx/xxxx	02/01/2016	Major	Entire Permit	Renewal; Incorporated Construction Permits 296-05-C (8,000-gallon storage tank), 79-06-C (R1) [350-gallon storage tank, Tank #55], and 347-08-C [carbon adsorption unit]; Incorporated Federal Regulation 40 CFR 63 Subpart BBBBBB

#### 7. Construction Permit History:

Permit No.	Issue Date	Description
79-06-C (R1)	03/31/2009	One (1) 350-gallon storage tank (Tank #55) for a fuel additive (Infineum R693)
347-08-C	04/30/2008	One (1) Jordan Technologies carbon adsorption unit to control emissions from the truck loading rack. Model JT-7082-1000
296-05-C	09/30/2006	One (1) 8,000-gallon horizontal steel storage vessel (diesel fuel additive)

#### 8. Emission Summary:

Pollutant	Actual Emissions (tpy) 2014 Data <sup>1</sup>	Pollutant that triggered Major Source Status (based on PTE)
VOC	44.45	Yes <sup>2</sup>
Total HAPs	3.37	Yes <sup>2</sup>

Pollutant	Actual Emissions (tpy) 2014 Data <sup>1</sup>	Pollutant that triggered Major Source Status (based on PTE)
Single HAP > 0.5 tpy		
Hexane	1.96	Yes <sup>2</sup>

<sup>1</sup>The actual emissions are the December 2014 consecutive 12-month total that was obtained from the semi-annual compliance report received by the District on February 27, 2015. The reporting period for this report began on July 01, 2014 and ended on December 31, 2014.

<sup>2</sup> Buckeye Terminals, LLC has accepted synthetic minor limits.

**9. Applicable Requirements:**

PSD       40 CFR 60       SIP       40 CFR 63  
 NSR       40 CFR 61       District-Origin       Other

**10. Future MACT Requirements:** The source has no future MACT requirements.

**11. Referenced Federal Regulations in Permit:**

- 40 CFR Part 60 Subpart A      General Provisions
- 40 CFR Part 60 Subpart Kb      Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
- 40 CFR Part 60 Subpart XX      Standards of Performance for Bulk Gasoline Terminals
- 40 CFR Part 63 Subpart A      General Provisions
- 40 CFR 63 Subpart ZZZZ      National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
- 40 CFR Part 63 Subpart BBBB      National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities

**12. Non-Applicable Regulations:****a. Emission Unit U1 – Storage Tanks**

- i. **District Regulation 7.12:** This regulation is applicable to storage tanks holding volatile organic compounds for which construction or modification commenced on or after April 19, 1972, and has a storage capacity greater than 250 gallons. No storage tanks storing volatile organic compounds were installed after 1972.
- ii. **40 CFR 60 Subpart K:** This regulation is applicable to storage tanks holding petroleum liquids, defined under 40 CFR 60.111(b), for which construction, reconstruction, or modification commenced after June 11, 1973, and prior to May 19, 1978. No storage tanks at the facility were installed between 1973 through 1978.
- iii. **40 CFR 60 Subpart Ka:** This regulation is applicable to storage tanks holding petroleum liquids, defined under 40 CFR 60.111a(b), for which construction, reconstruction, or modification commenced after May 18, 1978, and prior to July 23, 1984. No storage tanks at the facility were installed between 1978 through 1984.
- iv. **40 CFR 60 Subpart Kb:** This regulation is applicable to storage tanks holding volatile organic liquids, defined under 40 CFR 60.111b, for which construction, reconstruction, or modification commenced after July 23, 1984, and has a capacity greater than or equal to 75 m<sup>3</sup> (19,813 gallons). There are storage tanks installed after 1984, but none are greater than 75 m<sup>3</sup> (19,813 gallons).

**b. Emission Unit U2 – Truck Loading Rack**

- i. **District Regulation 6.21:** This regulation applies to each affected facility which was in being or had a construction permit issued by the District before June 13, 1979. Buckeye Terminals replaced the existing truck loading rack with a newly constructed truck loading rack in 1994.
- ii. **District Regulation 7.20:** As mentioned under District Regulation 7.20, Section 2.3, the facility is applicable to this district regulation if the storage and dispensing of gasoline employs tank trucks, trailers, railroad cars, or other mobile non-marine vessels for both incoming and outgoing gasoline transfer operations. Gasoline comes into the facility by pipeline and barge, and leaves the facility by truck.
- iii. **District Regulation 7.22:** This regulation applies to a loading facility of volatile organic material (VOM), other than gasoline, into

tank trucks, trailers, or railroad tank cars. Besides gasoline, there are no other VOM products transported out of the facility. Diesel has low vapor pressure, and can be categorized as an IA. Ethanol comes in by truck and is blended with gasoline before leaving the facility; no pure ethanol leaves the facility.

- iv. **40 CFR 63 Subpart R:** 40 CFR 63.420(a)(2) mentions major sources as being the only facilities subject to this federal regulation. Buckeye Terminals, LLC is not a major source.
- c. **Emission Unit U3 – Barge Loading**
  - i. **40 CFR 63 Subpart Y:** As defined under the Definitions of 40 CFR 63.561, only major sources are applicable to this federal regulation. Buckeye Terminals, LLC is not a major source.
- d. **Other Regulations**
  - i. **40 CFR 63 Subpart JJJJ:** This regulation applies to owners or operators of an industrial, commercial, or institutional boiler located, or is part of, an area source of hazardous air pollutants (HAP). Buckeye Terminals, LLC has a tankless hot water heater as defined under the definitions of 40 CFR 63.11237. As stated under 40 CFR 63.11195(f), hot water heaters are not subject to Regulation 40 CFR 63 Subpart JJJJ.

## II. Regulatory Analysis

1. **Acid Rain Requirements:** Buckeye Terminals, LLC is not subject to the Acid Rain Program.
2. **Stratospheric Ozone Protection Requirements:** Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Buckeye Terminals, LLC does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.
3. **Prevention of Accidental Releases 112(r):** Buckeye Terminals, LLC does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, *Chemical Accident Prevention Provisions*, in a quantity in excess of the corresponding specified threshold amount.
4. **40 CFR Part 64 Applicability Determination:** Buckeye Terminals, LLC is not subject to 40 CFR Part 64 - *Compliance Assurance Monitoring for Major Stationary Sources*.

## 5. Basis of Regulation Applicability

### a. Plant-wide

Buckeye Terminals, LLC is a potential major source for the pollutant VOC. Regulation 2.17 – *Federally Enforceable District Origin Operating Permits* establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. Buckeye Terminals has a plant-wide VOC emission limit of 100 tons per 12 consecutive month period, as well as a plant-wide combined HAP emission limit of 25 tons per 12 consecutive month period and a plant-wide single HAP emission limit of 10 tons per 12 consecutive month period.

District Regulation 2.17, section 5.2 requires monitoring and record keeping to assure ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the District upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.

40 CFR Part 63 Subpart BBBB is applicable to gasoline storage tanks, gasoline loading racks, vapor collection-equipped gasoline cargo tanks, and equipment components in gasoline service. Due to the specifications of the storage tanks at Buckeye Terminals, Subpart BBBB references the conditions from 40 CFR 60 Subpart Kb to establish requirements and demonstrate compliance. An initial notification was received by the District on May 8, 2008. A Notification of Compliance Status (NOCS) was received by the District on January 10, 2011. A Monitoring and Inspection Plan was received on December 2010.

District Regulation 1.05 requires the owner or operator to maintain and operate the affected facility in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator shall

monitor and maintain records from the 1.05 compliance plan, which outlines various inspections and preventative maintenance procedures. A revised 1.05 Compliance Plan referenced in this permit was received on April 29, 2015. A previous version of the 1.05 Compliance Plan was received on June 11, 1993.

Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

**b. Emission Unit U1 – Storage Tanks**

**i. Equipment:**

<b>Emission Point (Tank ID)</b>	<b>Product (Capacity, Gallons)</b>	<b>Install Date</b>	<b>Applicable Regulation</b>	<b>Basis for Applicability</b>
E3 (102)	Gasoline/ (1,520,404)	1934	Depending on the tank specifications, only certain regulations will apply to the storage tanks: 1.02, 1.05, 5.00, 5.01, 5.20, 5.21, 5.22, 5.23, 6.13, and 40 CFR 63 Subpart BBBB	Regulation 1.02 establishes the requirements for certain storage tanks not to be permitted.
E4 (103)	Gasoline (1,391,721)	1932		
E5 (104)	Gasoline (1,433,363)	1934		Regulation 1.05 establishes the owner or operator to maintain and operate the affected facility in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator shall monitor and maintain records from the 1.05 compliance plan, which outlines various inspections and preventative maintenance procedures.
E6 (105)	Gasoline (1,511,094)	1932		
E7 (101)	Distillate (992,017)	1934		
E8 (106)	Distillate (391,042)	1940		
E9 (110)	Distillate (959,204)	1940		
E10 (10)	Gasoline Additive (8,000)	1985		
E11 (20)	Distillate Additive (10,000)	1985		Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish the requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.
E16 (25)	Distillate (1,000)	1985		
E17 (30)	Gasoline Additive (500)	2002		

Emission Point (Tank ID)	Product (Capacity, Gallons)	Install Date	Applicable Regulation	Basis for Applicability
E18 (35)	Distillate Additive (120)	1995		Regulation 6.13 applies to each storage vessel for volatile organic compounds that was in being or had a construction permit issued by the District before September 01, 1976, was not subject to Regulation 7.12, and that has a storage capacity greater than 250 gallons.  40 CFR Part 63 Subpart BBBBBB establishes national emission limitations, management practices, and requirements to demonstrate compliance for HAP emitted from gasoline distribution bulk terminals.
E19 (45)	Empty (2,000)	1985		
E20 (50)	Transmix/ Slop (250)	1985		
E22 (SL-03)	Transmix/ Slop (8,000)	1985		
E23 (55)	Distillate Additive (350)	2006		
E24 (15)	Distillate Additive (6,000)	2005		
E25 (107)	Ethanol (374,933)	1940		
E26 (60)	Empty (4,000)	2011		

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to operate the loading rack.
- (b) Regulation 6.13, section 3 establishes the requirements to install, maintain, and operate the applicable storage tanks.

2) **HAP**

- (a) Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to operate the loading rack.
- (b) The applicable storage tanks are subject to 40 CFR 63 Subpart BBBBBB.

c. **Emission Unit U2 – Truck Loading Rack**

i. **Equipment:**

Emission Point	Description	Install Date	Applicable Regulation	Basis for Applicability
U3 - E1	One (1) truck loading rack consisting of two (2) bays, each bay contains six (6) loading arms (54,000 gal/hr for the entire truck loading rack)	1999	1.04, 1.05, 5.00, 5.01, 5.02, 5.20, 5.21, 5.22, 5.23, 7.02, 40 CFR Part 60 Subpart A, 40 CFR Part 60 Subpart XX, and 40 CFR 63 Subpart BBBBBB	<p>Regulation 1.04 establishes the requirements necessary for conducting a performance test.</p> <p>Regulation 1.05 establishes the owner or operator to maintain and operate the affected facility in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator shall monitor and maintain records from the 1.05 compliance plan, which outlines various inspections and preventative maintenance procedures.</p> <p>Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish the requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.</p> <p>40 CFR 60 Subpart A establishes the applicable standards for affected facilities.</p> <p>40 CFR 60 Subpart XX applies to all the loading racks at a bulk gasoline terminal which deliver liquid product into gasoline tank trucks.</p> <p>Regulation 7.02 adopts and incorporates the New Source Performance Standards, including the ones listed above.</p> <p>40 CFR Part 63 Subpart BBBBBB establishes national emission limitations, management practices, and requirements to demonstrate compliance for HAP emitted from gasoline distribution bulk terminals.</p> <p>Regulation 5.02 adopts and incorporates the National Emission Standards for Hazardous Air Pollutants, including the ones listed above.</p>

ii. **Standards/Operating Limits**

1) **VOC**

- (a) Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to operate the loading rack.
- (b) Regulation 40 CFR Part 60, Subpart XX, section 502 also establishes requirements to install, maintain, and operate the loading rack.

2) **HAP**

- (a) Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to operate the loading rack.
- (b) The loading rack is subject to 40 CFR 63 Subpart BBBBBB.

d. **Emission Unit U3 – Barge Loading and Unloading Operation**

i. **Equipment:**

<b>Emission Point</b>	<b>Description</b>	<b>Install Date</b>	<b>Applicable Regulation</b>	<b>Basis for Applicability</b>
E2	One (1) barge loading and unloading operation (147,000 gal/hr for the barge loading operation)	1957	5.00, 5.01, 5.20, 5.21, 5.22, 5.23,	Regulation 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish the requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

ii. **Standards/Operating Limits**

1) **VOC**

Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to perform the barge loading operation.

2) **HAP**

Regulation 2.17, section 5.1 establishes operational requirements and limitations to assure ongoing compliance to perform the barge loading operation.

3) **TAC**

Regulations 5.00, 5.01, 5.20, 5.21, 5.22, and 5.23 (STAR Program) establish requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards.

### III. Other Requirements

1. **Temporary Sources:** The source did not request to operate any temporary facilities.
2. **Short Term Activities:** The source did not report any short term activities.
3. **Emissions Trading:** N/A
4. **Alternative Operating Scenarios:**

The owner or operator is authorized to bring onsite vacuum trucks for temporary maintenance/emergency response usage. The vacuum trucks are not owned by Buckeye Terminals, they are brought from offsite, and the product accumulated in the vacuum trucks is disposed of offsite. The facility shall continue to calculate emissions from this equipment to ensure compliance is maintained.

The owner or operator shall be allowed to utilize the portable vapor combustion unit (PVCU) during emergency shutdowns or other periods of downtime of the vapor recovery unit (VRU). Loading of gasoline is not allowed unless the emissions are being controlled by the VRU or the PVCU. The facility shall continue to follow the requirements for the PVCU and VRU listed under the Monitoring and Record Keeping, and Reporting sections of this Emission Unit. The facility shall continue to monitor loading rates and calculate emissions to ensure compliance is maintained.

5. **Compliance History:** There are no records of any violations of the terms of the present or prior construction or operating permits. Buckeye Terminals, LLC is currently in compliance.
6. **Calculation Methodology or Other Approved Method:**

Emission Unit U1 – Storage Tanks: Buckeye Terminals, LLC used TANKS 4.0.9d, or equivalent, to determine the potential VOC emissions being emitted from the storage tanks. Concentration of HAPs were determined using API Publication

1673, Table 3-1 (1998), as well as a publication from the Radian Corporation (1995).

Emission Unit U2 – Truck Loading Rack: Buckeye Terminals, LLC used EPA’s AP-42 methodology (Chapter 5.2, Transportation and Marketing of Petroleum Liquids – Equation 1) to calculate the potential VOC emissions from loading distillate products. As a worst-case scenario, the emission limit given under 40 CFR 60.502(b) of Subpart XX (35 mg/L) was used as an emission factor to calculate the potential VOC emissions from loading gasoline products. Concentration of HAPs were determined using API Publication 1673, Table 3-1 (1998), as well as a publication from the Radian Corporation (1995).

Emission Unit U3 – Barge Loading and Unloading Operation: Buckeye Terminals, LLC used the emission factors and calculation methodology in EPA’s AP-42 (Chapter 5.2, Transportation and Marketing of Petroleum Liquids) to calculate the potential emissions from loading distillate products.

Other Emissions: Buckeye Terminals, LLC used the emission factors and calculation methodology in EPA’s AP-42 (Chapter 3.3, Gasoline and Diesel Industrial Engines) to calculate the potential emissions from the hot water heater. Buckeye Terminals, LLC used the emission factors and calculation methodology in EPA’s AP-42 (Chapter 3.3, Gasoline and Diesel Industrial Engines) to calculate the potential emissions for the emergency generator. The vacuum truck potential emissions use Appendix A of the Proposed Regulation 8, Rule 53: *VACUUM TRUCK OPERATIONS*.

**7. Insignificant Activities**

Description	Quantity	Basis for Exemption
Indirect heat exchangers less than 10 MMBtu/hr, except those that burn waste oil (Hot water heater, Capacity: 140,000 BTU/hr, Fuels burned: distillate)	1	Regulation 1.02, Appendix A, sec. 1.1
Stationary emergency generator [Make: Generac, Model: 90A 01403 S, Capacity: 1,800 RPM or 15 KW]	1	Regulation 1.02, sec. 1.38.1.1
Vacuum trucks brought onsite to be utilized for temporary maintenance/emergency response usage.	Up to 2	Regulation 1.02, sec. 1.38.1.1
Oil-water separator containing less than 200 gallons a day	1	Regulation 7.36, sec. 1

1) Insignificant activities identified in District Regulation 1.02, Appendix A, may be

subject to size or production rate disclosure requirements.

- 2) Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.
- 3) The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15<sup>th</sup>.
- 4) Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.
- 5) The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.
- 6) The District has determined that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.