

State Registration Number
B2247

**RENEWABLE OPERATING PERMIT
STAFF REPORT**

ROP Number
MI-ROP-B2247-2020

Buckeye Terminals, LLC - Detroit Terminal

State Registration Number (SRN): B2247

Located at

700 South Deacon Street, Detroit, Wayne County, Michigan 48217

Permit Number: MI-ROP-B2247-2020

Staff Report Date: August 24, 2020

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) of the administrative rules promulgated under Act 451, requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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Purpose

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act; and Michigan's Administrative Rules for Air Pollution Control promulgated under Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

General Information

Stationary Source Mailing Address:	Buckeye Terminals, LLC - Detroit Terminal 700 South Deacon Street Detroit, Michigan 48217
Source Registration Number (SRN):	B2247
North American Industry Classification System (NAICS) Code:	493190
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201400092
Responsible Official:	Paul H. Ransom, Assistant Operations Manager 484-951-4049
AQD Contact:	Rebecca Loftus, Senior Environmental Quality Analyst 313-418-3401
Date Application Received:	June 11, 2014
Date Application Was Administratively Complete:	June 11, 2014
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	August 24, 2020
Deadline for Public Comment:	September 23, 2020

Source Description

Buckeye Terminals, LLC-Detroit Terminal is located in southwest Detroit, between the Fisher Freeway (Interstate 75) and the Rouge River. The nearest residential area is approximately 150 yards to the south. The facility is a petroleum hydrocarbon fuels distribution terminal. The products are received by pipeline and stored in fixed roof storage vessels with internal floating roofs. The terminal has several above-ground storage tanks, ranging in size from 30,000 gallons to 4.6 million gallons designated for either gasoline or distillate service and several fixed roof tanks for storage of gasoline and diesel additives; these are identified in the ROP and below as EUTANK#5 through EUTANK#15 and EUTANK#17 through EUTANK#24 (note EUTANK#21 does not exist). The facility also has an 8,000 gallon underground tank which is part of the emergency spill containment for the loading rack and a 54,600 gallon pressurized butane tank, identified as EUTANK#16. Gasoline and distillate are bottom loaded into tank trucks for distribution to marketing stations. Gasoline additive is metered into gasoline during tank truck loading into gasoline during tank truck loading.

The terminal has a four-bay tank truck loading rack, identified as EULOADING. Each rack is equipped with hoses and associated piping that hook up to a vapor control system. During loading operations, the vapors displaced from tank trucks are routed to the primary control device, a carbon adsorption/absorption vapor recovery unit (VRU). The VRU controls the volatile organic compounds (VOC) emissions from the loading rack operations. There are two carbon adsorption units that alternate between adsorption mode and regeneration mode at 15-minute intervals. The system also employs a liquid knockout tank and pressure/relief vent upstream from the VRU. Trucks are loaded only when the VRU is operating in a satisfactory manner. The VRU has an interlocking system that will not allow tankers to load product if the vapor line is not connected. Each loading bay is equipped with an overflow detector level control system that shuts off product flow to the tanker when the tanker capacity reaches a specified level. In addition, a valid tanker truck vapor tightness certification is required to load product at the terminal. Operators that fail to renew their vapor tightness certification for a given truck are not allowed to load product to that truck at the terminal. If the VRU is offline, Buckeye Terminal LLC-Detroit Terminal uses a portable vapor combustion unit (VCU) as a back-up control system.

The facility has an air stripper unit operation, identified as EUAIRSTRIPPER, for the treatment of run-off wastewater containing dissolved concentrations of gasoline previous to the discharge to the sanitary sewer system.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2019**.

TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Volatile Organic Compounds (VOCs)	29.51

The following table lists Hazardous Air Pollutant emissions as calculated for the year 2019 by Buckeye Terminal LLC-Detroit Terminal:

Individual Hazardous Air Pollutants (HAPs) **	Tons per Year
2.2.4- Trimethylpentane	0.21
Benzene	0.12
Ethylbenzene	0.03
Hexane	0.41
Toluene	0.32
Xylenes	0.12
Total Hazardous Air Pollutants (HAPs)	1.21

**As listed pursuant to Section 112(b) of the federal Clean Air Act.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in an area of Wayne County which is currently designated by the U.S. Environmental Protection Agency (USEPA) as a non-attainment area with respect to the 8-hour ozone standard. A portion of Wayne County is also currently designated by the USEPA as a non-attainment area with respect to the sulfur dioxide standard (SO₂); the stationary source is located in this portion of Wayne County.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of volatile organic compounds exceeds 100 tons per year. However, the stationary source is a minor source of Hazardous Air Pollutants (HAP) emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration (PSD) regulations of The Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality or 40 CFR 52.21 because the process equipment was constructed/installed prior to June 19, 1978, the promulgation date of the PSD regulations

On September 16, 1982, the Wayne County Air Pollution Control Division (WCAPCD) issued Wayne County Permit Nos. C-6187 to C-6190 for EULOADING. Wayne County Permit No. C-6191 was issued on September 16, 1982 for the operation of the VRU for EULOADING. These permits were superseded by Permit to Install (PTI) No. 149-15, issued on September 15, 2015, for the truck loading rack and installation of a portable VCU during periods of time when the VRU is offline. EULOADING at the stationary source is subject to 40 CFR Part 60, Subparts A and XX, the New Source Performance Standards for Bulk Gasoline Terminals.

WCAPCD issued permits for EUTANK#9 and EUTANK#12. EUTANK#9, originally a fixed-roof tank, was retrofitted with an internal floating roof (IFR) after Wayne County Permit No. C-7863 was issued on November 6, 1987. Wayne County Permit C-7863 also allowed the storage of various grades of gasoline in addition to kerosene and jet fuel. The permit was amended on November 6, 1995, to increase the material and emission limits. On April 1, 2000, the AQD issued PTI No. 364-99 to add distillate fuel oil as a product stored in EUTANK#9. Wayne County Permit No. C-7863 was superseded by PTI No. 364-99.

EUTANK#12 was originally constructed with a fixed roof and the IFR was added to the tank around 1993. Wayne County Permit No. C-11800, issued on September 8, 1998, for EUTANK#12 allowed the increase in material throughput and VOC emission limits, as well as the storage of other fuels. Permit C-11800 was replaced with PTI No. 314-98 issued by AQD on August 20, 1999.

Per 40 CFR 60.14(e), the permit revisions for EUTANK#9 and EUTANK#12 did not constitute a modification. Therefore, these tanks are not subject to 40 CFR Part 60, Subpart Kb, the Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984.

Because EUTANK#5, EUTANK#6, EUTANK#7, EUTANK#8, EUTANK#10, and EUTANK#11 were installed prior to August 15, 1967, this equipment was exempt from New Source Review (NSR) permitting requirements at the time it was installed. However, future modifications of this equipment may be subject to NSR. The tanks store organic compounds having true vapor pressures of more than 1.5 psia, but less than 11 psia at actual storage conditions in mostly fixed roof stationary vessels of more than 40,000-gallon. They are considered existing sources of VOCs and therefore subject to the requirements of EGLE's Air Pollution Control Rule 604. Conditions pertaining to Rule 604 can be found in the ROP under FGGASTANKS.

On June 1, 1995, WCAPCD issued Wayne County Permit No. C-10736 for EUAIRSTRIPPER. This permit was superseded by PTI No. 200-16, issued on April 27, 2017, which modified the testing and monitoring requirements.

Buckeye Terminals LLC-Detroit Terminal has requested the removal of EUBOILER, a 1.08 MMBTU/hour oil-fired boiler, from the ROP because it is no longer utilized at the facility and will not be brought back into service. During an inspection, conducted on June 25, 2020, AQD staff determined EUBOILER is inoperable. Therefore, EUBOILER has been removed from the ROP. If Buckeye would like to operate EUBOILER or replace EUBOILER with a new boiler, Buckeye must first obtain a new permit to install pursuant to rules promulgated by the AQD.

Section 63.420 of 40 CFR Part 63, Subpart R, the National Emission Standards for Gasoline Distribution Facilities, states that the affected source to which the provisions of this rule applies is each bulk gasoline terminal, except those terminals for which the owner or operator has documented and recorded that the emission screening factor (E_T) in the equation listed in this section is less than 1 and complies with Sections 63.420(c), (d), (e), and (f). On August 16, 2019, Buckeye Terminal provided documentation that E_T equals 0.82. Therefore, according to Section 63.420(c), the stationary source is exempt from the requirements of this subpart, except that the owner or operator shall: (1) Operate the facility such that none of the facility parameters used to calculate results under paragraph (a)(1) or (b)(1) of this section, and approved by the Administrator, is exceeded in any rolling 30-day period; and (2) Maintain records and provide reports in accordance with the provisions of §63.428(i). Conditions pertaining to 40 CFR Part 63, Subpart R, can be found in the ROP under FGMACT6B.

Additionally, EUTANK#5, EUTANK#6, EUTANK#7, EUTANK#8, EUTANK#9, EUTANK#10, EUTANK#11, EUTANK#12, and EULOADING at the stationary source are 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. Conditions pertaining to 40 CFR Part 63, Subpart BBBBBB, can be found in the ROP under FGMACT6B.

The AQD's Rules 287 and 290 were revised on December 20, 2016. FGRULE287(2)(c) and FGRULE290 are flexible group tables created for emission units subject to these rules. Emission units installed before December 20, 2016, can comply with the requirements of Rule 287 and Rule 290 in effect at the time of installation or modification as identified in the tables. However, emission units installed or modified on or after December 20, 2016, must comply with the requirements of the current rules as outlined in the tables. Currently, Buckeye Terminals LLC-Detroit Terminal has one emission unit subject to Rule 290: EUTANK#16, a 54,600-gallon pressurized butane storage tank. Conditions pertaining to Rule 290 can be found in the ROP under FGRULE290.

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The emission limitation(s) or standard(s) for VOC from EULOADING while using the Vapor Recovery Unit (VRU) as control equipment at the stationary source are exempt from the federal Compliance Assurance Monitoring (CAM) regulation pursuant to 40 CFR 64.2(b)(1)(vi), because 35 mg VOC per liter of gasoline

loaded and 0.7 pounds VOC per 1000 gallon of gasoline loaded meet the CAM exemption for a continuous compliance determination method. The continuous emission monitoring system (CEMS) provides data either in units of the standard or it is correlated directly with the compliance limit.

If the portable vapor combustion unit (VCU) is used as control, the following Emission Units are subject to CAM:

Emission Unit/Flexible group ID	Pollutant/Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
EUNLOADING	VOC/35 mg/liter of gasoline loaded	40 CFR 60.502(b)	VCU	Presence of a pilot flame	EUNLOADING	Yes
EUNLOADING	VOC/0.7 pounds per 1000 gallons of gasoline loaded	R 336.1609(2)	VCU	Presence of a pilot flame	EUNLOADING	Yes

*Presumptively Acceptable Monitoring (PAM)

The tank truck loading rack uses a VRU equipped with a CEMS for primary control. A portable VCU can be brought to the site as a back-up control when the VRU is malfunctioning. When using the portable VCU, the heat sensing device continuously monitors for the presence of a flame. Monitoring and detecting the presence of thermal oxidation system pilot flame is an acceptable monitoring method for the proper operation of the thermal oxidizers. Unless a pilot flame is detected, vapors cannot be introduced into the VCU. The terminal VCU has a safety interlock system that shuts down the gasoline loading unit when the pilot flame is not detected. While operating the portable VCU, terminal staff performs daily checks to verify operational status of the control equipment and adherence to system performance criteria. In addition, preventative maintenance is performed at a minimum on a semi-annual basis to ensure that the portable VCU continues to operate as designed.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

Source-Wide Permit to Install (PTI)

Rule 214a requires the issuance of a Source-Wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs and Wayne County permits that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-B2247-2009 are identified in Appendix 6 of the ROP.

Wayne County Permit or PTI Number			
C-6187	C-6188	C-6189	C-6190
C-6191	C-7863	C-10736	C-11800
314-98	364-99		

Streamlined/Subsumed Requirements

This ROP does not include any streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Non-applicable Requirements

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

Processes in Application Not Identified in Draft ROP

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

PTI Exempt Emission Unit ID	Description of PTI Exempt Emission Unit	Rule 212(4) Citation	PTI Exemption Rule Citation
EUTANK#15	30,000 gallon diesel tank, out of service since 2007.	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#17	10,000 gallon horizontal tank for gasoline additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#18	10,000 gallon horizontal tank for gasoline additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#19	4,000 gallon horizontal tank for gasoline additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#20	550 gallon horizontal tank for diesel additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#22	4,000 gallon horizontal tank for gasoline additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#23	4,000 gallon horizontal tank for diesel additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUTANK#24	4,000 gallon horizontal tank for diesel additive storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUPCWTANK	10,000 gallon petroleum contact water (PCW) tank for wastewater storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUPCWOVERTANK	4,000 gallon PCW overflow tank for wastewater storage	R 336.1212(4)(d)	R 336.1284(2)(i)
EUFURNACE	Natural gas furnace for comfort heating with a maximum capacity of Less than 50 MMBtu/hour	R 336.1212(4)(c)	R 336.1282(2)(b)(i)
EUSPACEHEATER	Gas-fired radiant tube heater with maximum input capacity of 175,000 Btu /hour	R 336.1212(4)(c)	R 336.1282(2)(b)(i)

Draft ROP Terms/Conditions Not Agreed to by Applicant

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

Compliance Status

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

Action taken by EGLE, AQD

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD's proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Dr. April Wendling, Detroit District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

State Registration Number

B2247

RENEWABLE OPERATING PERMIT
September 28, 2020 STAFF REPORT ADDENDUM

ROP Number

MI-ROP-B2247-2020

Purpose

A Staff Report dated August 24, 2020, was developed to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by Rule 214(1) of the administrative rules promulgated under Act 451. The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in Rule 214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

General Information

Responsible Official:	Paul H. Ransom, Assistant Operations Manager 484-951-4049
AQD Contact:	Rebecca Loftus, Senior Environmental Quality Analyst 313-418-3401

Summary of Pertinent Comments

No pertinent comments were received during the 30-day public comment period.

Changes to the August 24, 2020 Draft ROP

No changes were made to the draft ROP.