

State Registration Number  
B9073

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-B9073-  
2019

**MPLX Terminals, LLC – Niles Terminal**

State Registration Number (SRN): B9073

Located at

2216 South 3<sup>rd</sup> Street, Niles, Berrien County, Michigan 49120

Permit Number: MI-ROP-B9073-2019

Staff Report Date: May 21, 2019

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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Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number

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**RENEWABLE OPERATING PERMIT**

ROP Number

MI-ROP-B9073-2019

**May 21, 2019 STAFF REPORT**

**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:	MPLX Terminal LLC – Niles Terminal 2216 South Third Street Niles, Michigan 49120
Source Registration Number (SRN):	B9073
North American Industry Classification System (NAICS) Code:	424710
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201900020
Responsible Official:	Angela Brown, Vice President 419-421-2629
AQD Contact:	Matthew Deskins, Environmental Quality Analyst 269-567-3542
Date Application Received:	February 11, 2019
Date Application Was Administratively Complete:	February 11, 2019
Is Application Shield in Effect?	Yes
Date Public Comment Begins:	July 22, 2019
Deadline for Public Comment:	August 21, 2019

## **Source Description**

The MPLX Terminals LLC, Niles Terminal, consists of two adjacent petroleum product terminals located at 2216 and 2140 South Third Street which are located approximately two and one-half miles south of the City of Niles, Berrien County, Michigan. MPLX Terminals LLC (Facility) owns and operates both the North and South Terminals. The Facility receives petroleum products in large batches, via a pipeline, into numerous above ground storage tanks. Products received include gasoline, diesel fuel, and kerosene. The products are subsequently loaded into mobile tank trucks for delivery to service stations and/or bulk plants. In addition, small quantities of various additives may be injected into the products as they are loaded into the mobile tank trucks. These products can also be shipped via pipeline from the North Terminal into the Wolverine pipeline.

Sources of air pollutants from this Facility include numerous above ground storage tanks and the two truck loading racks. Vapors that are displaced from the mobile tank trucks during loading are collected and controlled by vapor recovery units and returned to the storage tanks. The Facility also utilizes a portable vapor combustor as a back-up control device, as needed.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2017**.

### **TOTAL STATIONARY SOURCE EMISSIONS**

<b>Pollutant</b>	<b>Tons per Year</b>
Carbon Monoxide (CO)	0.05
Lead (Pb)	NA
Nitrogen Oxides (NO <sub>x</sub> )	0.01
Particulate Matter (PM)	NA
Sulfur Dioxide (SO <sub>2</sub> )	NA
Volatile Organic Compounds (VOCs)	41.5

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.

Berrien County is currently designated by the United States Environmental Protection Agency (USEPA) as a non-attainment area with respect to the 8-hour ozone standard and as attainment/unclassified for all other criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of VOCs exceeds 100 tons per year.

The stationary source is a "synthetic minor" source regarding HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, to less than 10 tons per year and the potential to emit of all HAPs combined to less than 25 tons per year.

No emission units at the stationary source are currently subject to the Prevention of Significant Deterioration regulations of Part 18, Prevention of Significant Deterioration of Air Quality of Act 451,

because at the time of New Source Review permitting the potential to emit of all criteria pollutants was less than 250 tons per year.

EUTK80-8 at the stationary source is subject to the Standards of Performance for Storage Vessels of Petroleum Liquids promulgated in 40 CFR, Part 60, Subparts A and K. The remaining storage vessels at the Facility either store organic compounds that are exempt from this requirement, do not meet the specifications of this rule, do not meet the size specifications of this rule, or were installed prior to June 11, 1973, and are exempt.

The stationary source is subject to the National Emission Standard for Hazardous Air Pollutants for Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities promulgated in 40 CFR, Part 63, Subparts A and BBBB. The ROP contains special conditions provided by the Facility for applicable requirements from 40 CFR, Part 63, Subparts A and BBBB. The AQD is not delegated the regulatory authority for this area source MACT.

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."

EURACK-SOUTH and EURACK-NORTH were originally installed prior to December 17, 1980; however, both were modified between December 17, 1980, and August 18, 1983, specifically for the purpose of complying with Reasonable Available Control Technology (RACT) and New Source Performance Standards (NSPS) regulations. As a result of these modifications, the Facility is not subject to the NSPS for Bulk Gasoline Terminals (40 CFR, Part 60, Subpart XX) pursuant to the exemption provided in 40 CFR, Part 60.500(c); however, because EURACK-SOUTH and EURACK-NORTH were modified, the Facility was required to submit air use permit applications pursuant to R 336.1201.

The submittal of air use permit applications for EURACK-SOUTH and EURACK-NORTH resulted in Best Available Control Technology (BACT) determinations on each rack pursuant to R 336.1702. Although many of the requirements in the air use permits were based upon RACT or NSPS standards, the underlying applicable requirement in most cases is R336.1702, not the RACT or NSPS citations. In addition, the BACT determinations resulted in certain requirements that were more stringent than the RACT or NSPS citations. Specifically, the air use permits for both racks required the Facility to utilize vapor control systems when loading gasoline. At that time, EURACK-SOUTH was controlled by a refrigerated condenser and EURACK-NORTH by a carbon adsorption system.

In 2000, the Facility replaced the EURACK-SOUTH refrigerated condenser with a carbon adsorption system under PTI exemption Rule 336.1285(f). This change did not subject EURACK-SOUTH to the NSPS, Subpart XX, regulation because it was the replacement of the control device, not a modification or reconstruction of the loadrack itself as defined under that regulation. It was mutually agreed upon that the new unit would have a VOC emission limit that met the NSPS, Subpart XX, requirement of 35 mg/l. EURACK-NORTH still has a VOC emission limit of 80 mg/l, as was established in the original permit.

A condition for testing the primary vapor control system at EURACK-NORTH and EURACK-SOUTH are included in this ROP. However; since the EURACK-NORTH is strictly used to load non-gasoline products at the present time, the AQD re-worded the condition in this ROP renewal to state that they have to test it within six months should the Facility commence the loading of gasoline products again. The intent is to have each vapor control device tested at least once during the effective dates of the ROP cycle.

The Facility was also permitted to operate a portable vapor combustion flare as a secondary vapor control system (EUVCU-PORT) for both EURACK-SOUTH and EURACK-NORTH. The submittal of the air use application for using the portable vapor combustor as an alternate control device was subject to a BACT determination pursuant to R 336.1702. The BACT determination concluded that the emissions from the loading racks when utilizing the portable vapor combustor should be equivalent to the limits set forth in 40

CFR, Part 60, Subpart XX. The underlying applicable requirement for the emissions limits, when using the portable vapor combustor, is R 336.1702(b). Note that the portable vapor combustor is not subject to the control device requirements in 40 CFR, Part 60.18, because the loading racks are not subject to 40 CFR, Part 60, Subpart XX.

EURACK-SOUTH and EURACK-NORTH at the stationary source are subject to the federal Compliance Assurance Monitoring (CAM) rule under 40 CFR, Part 64. These emission units have control devices and potential pre-control emissions of VOC greater than the major source threshold level.

The following Emission Units/Flexible Groups 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? *
EURACK-SOUTH	VOC - 35 mg per liter of organic compounds loaded	R 336.1213(2); 40 CFR 63.11088(a)	Carbon Adsorption	An average maximum vacuum level equal to or greater than 26 inches of Hg over a 6-hour period during active gasoline loading. The carbons beds shall be regenerated at least once every 15 minutes, except for periods of maintenance. For each scheduled work day, an electronic recording device shall monitor and record the carbon bed pressure.	FGLOADRA CKS	No
EURACK-NORTH	VOC – 80 mg per liter of organic compounds loaded	R 336.1706(2); 40 CFR 63.11088(a)	Carbon Adsorption	An average maximum vacuum level equal to or greater than 26 inches of Hg over a 6-hour period during active gasoline loading. The carbons beds shall be regenerated at least once every 15 minutes, except for periods of maintenance. For each scheduled work day, an	FGLOADRA CKS	No

Emission Unit/Flexible group ID	Pollutant/ Emission Limit	UAR(s)	Control Equipment	Monitoring (Include Monitoring Range)	Emission Unit/Flexible Group for CAM	PAM? *
				electronic recording device shall monitor and record the carbon bed pressure.		
EURACK-NORTH and EURACK-SOUTH using Secondary Vapor Control System	VOC - 35 mg per liter of organic compounds loaded	R 336.1702(b); 40 CFR 63.11088(a)	Portable Vapor Combustor	A thermocouple or other device shall continuously monitor for the presence of a pilot flame at all times the secondary portable unit is in use.	FGLOADRA CKS	No
EURACK-NORTH and EURACK-SOUTH using Secondary Vapor Control System	Opacity – 0%	40CFR 64.6(c)(1); 40 CFR Part 63 Subpart BBBBBB	Portable Vapor Combustor	A thermocouple or other device shall continuously monitor for the presence of a pilot flame at all times the secondary portable unit is in use.	FGLOADRA CKS	No

\*Presumptively Acceptable Monitoring (PAM)

The Primary Vapor Control on both the North and South Loading Racks are carbon adsorption systems. These controls were selected specifically for this installation based on the maximum expected loading and types of products loaded. The carbon beds and vacuum pump were sized appropriately. The vacuum achieved during regeneration is an indication of the performance of the VRU. If vacuum levels are too low, the carbon bed may not fully regenerate. Monitoring of the vacuum profile during regeneration, coupled with routine inspection activities, serves to verify that the VRU is operating properly and provides a reasonable assurance of compliance. The VRU system was designed and demonstrated by compliance tests to achieve the specified emissions limit when regenerated as specified.

The Secondary Vapor Control for both the North and South Loading Racks is a Portable Vapor Combustor Unit. It was custom-designed specifically for this installation based on the maximum expected loading and types of products loaded and the burner tips were sized appropriately. The presence of a pilot flame and absence of visible emissions are important variables in the performance of the flare. The pilot flame is monitored with a heat sensing device (such as an ultraviolet beam detector or thermocouple), which relays pilot failure to a control panel. Both factors are simple indicators that prove combustion has been achieved. Monitoring of the pilot flame and visible emissions during operations, serve to verify that the flare is operating properly and provide a reasonable assurance of compliance.

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 that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-B9073-2014 are identified in Appendix 6 of the ROP.

PTI Number			
447-77	853-79	990-80	1091-80
241-81	596-81	179-82	180-82
773-90	57-91	59-91	745-91
749-91	1189-91	694-93	225-96
75-98			

**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.

Exempt Emission Unit ID	Description of Exempt Emission Unit	Rule 212(4) Exemption	Rule 201 Exemption
EUTKAA1-7	550 gallon fixed roof storage tank that stores diesel additive.	Rule 212(4)(d)	Rule 284(2)(i)
EUWA-10-1	8,400 gallon fixed roof storage tank that stores petroleum contact water.	Rule 212(4)(d)	Rule 284(2)(i)
EUWA-10-2	8,400 gallon fixed roof storage tank that stores petroleum contact water.	Rule 212(4)(d)	Rule 284(2)(i)
EUTKAA6-3	6,000 gallon fixed roof storage tank that stores various diesel additives.	Rule 212(4)(c)	Rule 284(2)(i)
EUTKAA8-1	7,728 gallon fixed roof storage tank that stores various additives.	Rule 212(4)(d)	Rule 284(2)(i)
EUTKAA10-2	7,938 gallon fixed roof storage tank that stores various additives.	Rule 212(4)(d)	Rule 284(2)(i)
EUTKAA1-6	840 gallon fixed roof storage tank that stores various diesel additives.	Rule 212(4)(c)	Rule 284(2)(i)
EUBUTANE	One or more skids that inject butane into gasoline tank recirculation loops.	Rule 212(4)(i)	Rule 291

**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 the MDEQ, 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 Rex Lane, Kalamazoo 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.

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ROP Number  
MI-ROP-B9073-  
2019

**August 29, 2019 - STAFF REPORT ADDENDUM**

**Purpose**

A Staff Report dated May 21, 2019, 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:	Angela Brown, Vice President 419-421-2629
AQD Contact:	Matt Deskins, Environmental Quality Analyst 269-567-3542

**Summary of Pertinent Comments**

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

**Changes to the July 22, 2019 Draft ROP**

No changes were made to the draft ROP.