

Mr. Peter Reynolds
Marathon Ashland Petroleum, LLC
539 South Main Street, Rm 2624
Findlay, Ohio 45840

Dear Mr. Reynolds:

Re: Exempt Construction and Operation Status,
177-11577-00095

The application from Marathon Ashland Petroleum, LLC, 2020 Hawkins Road, Richmond, Indiana received on November 22, 1999, has been reviewed. Marathon Ashland Petroleum, LLC manufactures asphalt emulsion. Asphalt emulsion consists of three (3) basic ingredients: asphalt, water and emulsifying agent. The emulsifiers are fatty acids, which are wood-product derivatives such as tall oils, rosins, and lignins. Emulsifiers are turned into soap by reacting with sodium hydroxide or potassium hydroxide. Heated asphalt is fed into the colloid mill where it is divided into microscopic particles and dispersed in water containing the emulsifier to form the product, asphalt emulsion. Based on the data submitted and the provisions in Sections 1 and 2 of 326 IAC 2-1, it has been determined that this plant is classified as exempt from air pollution permit requirements:

The plant consists of the following existing storage tanks and the construction of two (2) new storage tanks to increase the source's storage capacity:

- (a) Two (2) new heated vertical fixed roof asphalt emulsion storage tanks, identified as T-34, and T-44, each has a capacity of 30,000 gallons, tank's height of 35 feet, and diameter of 12 feet.
- (b) Two (2) vertical fixed roof asphalt emulsion storage tanks, identified as RC-1 and RC-2, each with a capacity of 16,774 gallons, tank's height of 31 feet, and diameter of 10 feet.
- (c) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-3, with a capacity of 11,842 gallons, tank's height of 19 feet, and diameter of 10.3 feet.
- (d) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-20 with a capacity of 13,507 gallons, tank's height of 20 feet, and diameter of 10.3 feet.
- (e) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-21, with a capacity of 5,640 gallons, tank's height of 16 feet, and diameter of 8 feet.
- (f) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-30, with a capacity of 16,450 gallons, tank's height of 31 feet, and diameter of 10.0 feet.
- (g) Three (3) vertical fixed roof asphalt emulsion storage tank, identified as RC-31, RC40, and RC-41, each with a capacity of 28,287 gallons, tank's height of 36 feet, and diameter of 11.9 feet.
- (h) Two (2) vertical fixed roof asphalt emulsion storage tank, identified as RC-32, and RC-42, each with a capacity of 28,436 gallons, tank's height of 42 feet, and diameter of 11 feet.
- (i) Two (2) vertical fixed roof asphalt emulsion storage tank, identified as RC-33, and RC-43, each with a capacity of 25,261 gallons, tank's height of 41 feet, and diameter of 10.5 feet.

- (j) Two (2) heated vertical fixed roof asphalt emulsion storage tanks, identified as T-34, and T-44, each has a capacity of 30,000 gallons, tank's height of 35 feet, and diameter of 12 feet. This exemption is the first air approval issued to the source.

This source is hereby notified that this exemption does not relieve the source of the responsibility to comply with the provisions of any applicable federal, state, or local requirements, such as New source Performance Standards (NSPS), 40 CFR Part 60, as follows:

D.1.1 New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60)

Pursuant to 326 IAC 12 and 40 CFR Part § 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels), the following storage tanks are subject to the "Monitoring of Operation" requirement of Part 60.116b of this NSPS as follows:

- (a) New storage tanks T-34 and T-44, and existing storage tanks RC-31, RC-32, RC-33, RC-40, RC-41, RC-42 and RC-43 have capacities greater than 75 cubic meters (19,813 gallons) but less than 151 m³ (39,890 gallons) with maximum true vapor pressure less than 15 kPa are subject to the "Monitoring of Operation" requirement of Part 60.116b.

Section (b) requires the owner or operator of these storage vessels to keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.

Section (c) requires the owner or operator of these storage vessels to maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

Section (d) requires the owner or operator of these storage vessels storing a liquid that is normally less than 27.6 kPa shall notify the IDEM, OAM within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.

- (b) Storage tanks RC-1, RC-2, RC-3, RC-20, RC-30, with capacities less than 75 m³ (19,813 gallons) but greater than 40 m³ (10,567 gallons) are subject to the "Monitoring of Operation" requirement of Part 60.116b.

Section (b) requires the owner or operator of these storage vessels to keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.

Any change or modification which may increase the volatile organic compounds (VOC) potential to emit to 10 tons per year or more from the asphalt emulsions production, and from the equipment covered in this exemption must be approved by the Office of Air Management (OAM) before such change may occur.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

APD

cc: File -Wayne County
Wayne County Health Department
Air Compliance -Warren Greiling
Permit Tracking - Janet Mobley
Air Programs Section-Michelle Boner

Indiana Department of Environmental Management Office of Air Management

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name:	Marathon Ashland Petroleum, LLC
Source Location:	2020 Hawkins Road, Richmond, Indiana 47374
County:	Wayne
SIC Code:	2951
Exemption No.:	177-11577-00095
Permit Reviewer:	Aida De Guzman

The Office of Air Management (OAM) has reviewed an application from Marathon Ashland Petroleum, LLC relating to the operation of an asphalt emulsion manufacturing plant. Asphalt emulsion consists of three (3) basic ingredients: asphalt, water and emulsifying agent. The emulsifiers are fatty acids, which are wood-product derivatives such as tall oils, rosins, and lignins. Emulsifiers are turned into soap by reacting with sodium hydroxide or potassium hydroxide. Heated asphalt is fed into the colloid mill where it is divided into microscopic particles and dispersed in water containing the emulsifier to form the product, asphalt emulsion.

The plant consists of the following existing storage tanks and the construction of two (2) new storage tanks to increase the source's storage capacity:

- (a) Two (2) new heated vertical fixed roof asphalt emulsion storage tanks, identified as T-34, and T-44, each has a capacity of 30,000 gallons, tank's height of 35 feet, and diameter of 12 feet.
- (b) Two (2) vertical fixed roof asphalt emulsion storage tanks, identified as RC-1 and RC-2, each with a capacity of 16,774 gallons, tank's height of 31 feet, and diameter of 10 feet.
- (c) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-3, with a capacity of 11,842 gallons, tank's height of 19 feet, and diameter of 10.3 feet.
- (d) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-20 with a capacity of 13,507 gallons, tank's height of 20 feet, and diameter of 10.3 feet.
- (e) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-21, with a capacity of 5,640 gallons, tank's height of 16 feet, and diameter of 8 feet.
- (f) One (1) vertical fixed roof asphalt emulsion storage tank, identified as RC-30, with a capacity of 16,450 gallons, tank's height of 31 feet, and diameter of 10.0 feet.
- (g) Three (3) vertical fixed roof asphalt emulsion storage tank, identified as RC-31, RC40, and RC-41, each with a capacity of 28, 287 gallons, tank's height of 36 feet, and diameter of 11.9 feet.
- (h) Two (2) vertical fixed roof asphalt emulsion storage tank, identified as RC-32, and RC-42, each with a capacity of 28,436 gallons, tank's height of 42 feet, and diameter of 11 feet.

- (i) Two (2) vertical fixed roof asphalt emulsion storage tank, identified as RC-33, and RC-43, each with a capacity of 25,261 gallons, tank's height of 41 feet, and diameter of 10.5 feet.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on November 22, 1999, and January 24, 2000.

Emission Calculations

- (a) Storage Tanks Emissions: See attached Tanks Program Emissions Spreadsheets.
- (b) Asphalt emulsion consists of three (3) basic ingredients: asphalt, water and emulsifying agent. The emulsifiers are fatty acids, which are wood-product derivatives such as tall oils, rosins, and lignins. Emulsifiers are turned into soap by reacting with sodium hydroxide or potassium hydroxide. Heated asphalt is fed into the colloid mill where it is divided into microscopic particles and dispersed in water containing the emulsifier to form the product, asphalt emulsion.

There is an **insignificant amount or no VOC** is emitted from the process, since all the ingredients used do not contain VOC except for the asphalt. However, when asphalt is milled it is not heated at a high temperature to make the VOC flash off.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (pounds/year)	Potential To Emit (tons/year)
PM	0.0	0.0
PM-10	0.0	0.0
SO ₂	0.0	0.0
VOC	6.04	0.0033
CO	0.0	0.0
NO _x	0.0	0.0

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of volatile organic compounds (VOC) are well below 100 tons per year. Therefore, the source is **not** subject to the provisions of 326 IAC 2-7.

Justification for the Level of Approval

The tanks' PTE VOC of 0.0033 ton/year is well below the Registration threshold level of 10 tons/year. Therefore, the construction of the new tanks, is exempted from permitting requirements, pursuant to 326 IAC 2-1.1-3.

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units.

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Storage Tanks	0.0	0.0	0.0	0.0033	0.0	0.0	0.0033
Total Emissions	0.0	0.0	0.0	0.0033	0.0	0.0	0.0033

County Attainment Status

The source is located in Wayne County.

Pollutant	Status (attainment, maintenance attainment, or unclassifiable; severe, moderate, or marginal nonattainment)
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	not determined

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wayne County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Wayne County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Emissions (ton/yr)
PM	0.0
PM10	0.0
SO ₂	0.0
VOC	0.0033

CO	0.0
NO _x	0.0
HAPs	0.0033

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

- (a) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60):
- (1) 40 CFR § 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessel) for which construction, reconstruction, or modification commenced after July 23, 1984.
 - (a) New storage tanks T-34 and T-44, and existing storage tanks RC-31, RC-32, RC-33, RC-40, RC-41, RC-42 and RC-43 have capacities greater than 75 cubic meters (19,813 gallons) but less than 151 m³ (39,890 gallons) with maximum true vapor pressure less than 15 kPa are subject to the "Monitoring of Operation" requirement of Part 60.116b.

Section (b) requires the owner or operator of these storage vessels to keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.

Section (c) requires the owner or operator of these storage vessels to maintain a record of the VOL stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.

Section (d) requires the owner or operator of these storage vessels storing a liquid that is normally less than 27.6 kPa shall notify the IDEM, OAM within 30 days when the maximum true vapor pressure of the liquid exceeds the respective maximum true vapor pressure values for each volume range.
 - (b) Storage tanks RC-1, RC-2, RC-3, RC-20, RC-30, with capacities less than 75 m³ (19,813 gallons) but greater than 40 m³ (10,567 gallons) are subject to the "Monitoring of Operation" requirement of Part 60.116b.

Section (b) requires the owner or operator of these storage vessels to keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel for the life of the source.

- (b) National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63).

There are no NESHAPs that can possibly be applicable to these tanks.

State Rule Applicability - Entire Source

- (a) 326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting), because its VOC potential to emit of 0.00063 tons/year are well below one hundred (100) tons per year.
- (b) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
 - (1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

State Rule Applicability - Individual Facilities

- (a) 326 IAC 8-4-3 (Petroleum liquid Storage Facilities)
This rule applies to petroleum liquid storage tanks with capacities greater than 150,000 liters (39,000 gallons) containing volatile organic compounds whose true vapor pressure is greater than 10.5 kPa (1.52 psi).

All the storage tanks in the application are not subject to this rule, because their capacities are less than 39,000 gallons, and they don't store petroleum products.
- (b) 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
This rule is not applicable to these storage tanks, because this rule only applies to sources in Floyd, Clark, Lake or Porter County.
- (a) 326 IAC 2-4.1-1 New Sources of Hazardous Air Pollutants
This rule is not applicable to these tanks because they are not major sources of HAPs, and these tanks do not produce a final, or intermediate product in and of themselves. These tanks are integral part of the existing process.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments.

Conclusion

The construction and operation of these two (2) storage tanks, T-34 and T44 shall be subject to the conditions of the attached proposed **Exemption 177-11577-00095**