



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: July 18, 2007
RE: Marathon Petroleum Company / 033-24721-00039
FROM: Nisha Sizemore
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 03/23/06



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
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100 North Senate Avenue
Indianapolis, Indiana 46204-2215
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Mr. William J. Day
Marathon Petroleum Company, LLC - Waterloo Terminal
539 S. Main Street
Findlay, OH 45840

July 18, 2007

Re: Registration Notice-only Change No. 033-24721-00039

Dear Mr. Day:

Marathon Petroleum Company, LLC - Waterloo Terminal was issued a Registration No. 033-21652-00039 on February 22, 2006 for a stationary asphalt storage terminal located at 2760 US Highway 6, Waterloo, IN 46793. A letter notifying the Office of Air Quality of a notice-only change to the permit was received on May 1, 2007. The information that the source provided when they applied for the Registration, regarding the turnovers per year for each storage tank was incorrect. The source has requested to revise the turnovers per year for storage tank ID 25-1 from 7.0 to 14.0 and for storage tank IDs 80-4, 80-5, and 80-6 from 1.5 to 2.0 turnovers per year for each. This change will also increase the total asphalt throughput through the truck loading operations from 32,821,557 to 45,067,272 gallons per year. Based on the calculations provided by the source, the potential emissions of VOC will increase by 0.03 tons per year (from 0.70 to 0.73 tons per year) which is less than the exemption threshold levels specified in 326 IAC 2-1.1-3, and the worst case single HAP and total HAP emissions increase are negligible (see pages 1 and 2 of Appendix A). This revision in asphalt throughput will not trigger any additional federal or state regulations and is thus considered as a notice-only change pursuant 326 IAC 2-5.5-6(d). The entire source will remain a Registration source after this change.

The Registration is hereby revised as follows with deleted language as strikeouts and new language bolded:

Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following stationary ~~petroleum products~~ asphalt storage terminal, located at 2670 US Highway 6, Waterloo, IN 46793, is classified as registered:

- (a) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 10-3, constructed in 1977, with a maximum volume of 425,514 gallons, a maximum throughput of 4,255,000 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 10-3 Pipe Vent;
- (b) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 25-1, constructed in 1977, with a maximum volume of 1,019,736 gallons, a maximum throughput of ~~7,138,000~~ **14,276,304** gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 25-1 Pipe Vent;
- (c) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 25-2, constructed in 1977, with a maximum volume of 1,017,596 gallons, a maximum throughput of 6,106,000 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 25-2 Pipe Vent;

- (d) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-4, constructed in 1977, with a maximum volume of 3,431,463 gallons, a maximum throughput of ~~5,147,000~~ **6,862,926** gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 80-4 Pipe Vent;
- (e) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-5, constructed in 1977, with a maximum volume of 3,440,557 gallons, a maximum throughput of ~~5,161,000~~ **6,881,114** gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 80-5 Pipe Vent;
- (f) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-6, constructed in 1977, with a maximum volume of 3,343,106 gallons, a maximum throughput of ~~5,015,000~~ **6,686,212** gallons per year, a maximum asphalt temperature of 325°F, and exhausting to two (2) Tank 80-6 Pipe Vents;
- (g) one (1) natural gas-fired hot oil heater, designated as B-001, constructed in 1977, rated at 12.553 MMBtu/hr, with the capability to fire No. 2 distillate oil as backup fuel, exhausting through stack B-001;
- (h) one (1) natural gas-fired hot oil heater, designated as B-002, constructed in 1977, rated at 8.4 MMBtu/hr, with the capability to fire No. 2 distillate oil as backup fuel, exhausting through stack B-002;
- (i) truck loading racks used to load liquid asphalt, constructed in 1977, with a total maximum loading capacity of ~~16,854,000~~ **22,533,636** gallons of asphalt per year, exhausting to the atmosphere;
- (j) truck unloading racks used to unload liquid asphalt, constructed in 1977, with a total maximum unloading capacity of ~~16,854,000~~ **22,533,636** gallons of asphalt per year, exhausting to the atmosphere;

To minimize future changes to this Registration, OAQ has deleted the name and/or title of the Authorized Individual from this Registration.

IDEM, OAQ mailing address has been revised to add the mailing code as follows:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

All other conditions of the permit shall remain unchanged and in effect.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. Pursuant to Contract No. A305-0-00-34, IDEM, OAQ has assigned the processing of this permit application to Enviroplan Consulting (EVP). Therefore, questions should be directed to Adeel Yousuf/ EVP, Edgewater Commons II, 81 Two Bridges Road, Fairfield, New Jersey 07004, or call 973-575-2555, ext. 3252 to speak directly to Mr. Yousuf. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely/Original Signed By:

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments
AY/EVP

cc: File - DeKalb County
U.S. EPA, Region V
DeKalb County Health Department
IDEM Northern Regional Office
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Technical Support and Modeling



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Mr. William J. Day
Marathon Petroleum Company LLC - Waterloo Terminal
539 South Main Street
Findlay, OH 45840

July 18, 2007

Re: Registration Notice-Only Change No. 033-24721-00039
Registered Construction and Operation Status

Dear Mr. Day:

Marathon Petroleum Company, LLC was issued a Registration No. 033-21652-00039 on February 22, 2006 for a stationary asphalt storage terminal located at 2760 US Highway 6, Waterloo, IN 46793. On May 1, 2007, the Office of Air Quality (OAQ) received a letter from the source requesting that the Registration be updated to reflect the change in rate of turnovers for storage tanks and increase in total asphalt throughput through truck loading operations. Furthermore, to minimize future changes to this Registration, OAQ has deleted the name and/or title of the Authorized Individual from this Registration. These changes are considered notice-only changes pursuant to 326 IAC 2-5.5-6(d). No new state or federal rules are applicable to this source.

Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the operation of the following stationary asphalt storage terminal, located at 2670 US Highway 6, Waterloo, IN 46793, is classified as registered:

- (a) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 10-3, constructed in 1977, with a maximum volume of 425,514 gallons, a maximum throughput of 4,255,000 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 10-3 Pipe Vent;
- (b) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 25-1, constructed in 1977, with a maximum volume of 1,019,736 gallons, a maximum throughput of 14,276,304 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 25-1 Pipe Vent;
- (c) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 25-2, constructed in 1977, with a maximum volume of 1,017,596 gallons, a maximum throughput of 6,106,000 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 25-2 Pipe Vent;
- (d) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-4, constructed in 1977, with a maximum volume of 3,431,463 gallons, a maximum throughput of 6,862,926 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 80-4 Pipe Vent;
- (e) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-5, constructed in 1977, with a maximum volume of 3,440,557 gallons, a maximum throughput of 6,881,114 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to Tank 80-5 Pipe Vent;

- (f) one (1) heated vertical storage tank, with fixed cone roof, for storage of asphalt, designated as Tank 80-6, constructed in 1977, with a maximum volume of 3,343,106 gallons, a maximum throughput of 6,686,212 gallons per year, a maximum asphalt temperature of 325°F, and exhausting to two (2) Tank 80-6 Pipe Vents;
- (g) one (1) natural gas-fired hot oil heater, designated as B-001, constructed in 1977, rated at 12.553 MMBtu/hr, with the capability to fire No. 2 distillate oil as backup fuel, exhausting through stack B-001;
- (h) one (1) natural gas-fired hot oil heater, designated as B-002, constructed in 1977, rated at 8.4 MMBtu/hr, with the capability to fire No. 2 distillate oil as backup fuel, exhausting through stack B-002;
- (i) truck loading racks used to load liquid asphalt, constructed in 1977, with a total maximum loading capacity of 22,533,636 gallons of asphalt per year, exhausting to the atmosphere;
- (j) truck unloading racks used to unload liquid asphalt, constructed in 1977, with a total maximum unloading capacity of 22,533,636 gallons of asphalt per year, exhausting to the atmosphere;

The following conditions shall be applicable:

- (a) Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (1) Opacity shall not exceed an average of forty percent (40%) in 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.
- (b) Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (c) Pursuant to 326 IAC 6-2-2(c) (Particulate Emission Limitations for Sources of Indirect Heating), each of the hot oil heaters have a particulate matter emission limitation of 0.6 pounds per million British thermal units heat input (lb/MMBtu).

This registration is the first registration issued to this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

**Compliance Data Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204**

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely/Original Signed By:

Nisha Sizemore, Chief
Permits Branch
Office of Air Quality

Attachments

AY/EVP

cc: File - DeKalb County
U.S. EPA, Region V
DeKalb County Health Department
IDEM Northern Regional Office
Air Compliance Section Inspector
Compliance Data Section
Administrative and Development
Technical Support and Modeling

Registration Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3)

Company Name:	Marathon Petroleum Company LLC
Address:	2670 US Highway 6
City:	Waterloo, IN 46793
Phone #:	419-422-2121
Registration #:	033-24721-00039

Certification by the Authorized Individual

I hereby certify that Marathon Petroleum Company, LLC is still in operation and is in compliance with the requirements of Registration No. 033-24721-00039.

Name (typed):

Title:

Signature:

Date:

Phone Number:

Appendix A: Emissions Calculations

Company Name: Marathon Petroleum Company LLC
Address City IN Zip: 2670 US Highway 6, Waterloo, IN 46793
Permit Number: 033-24721
Plt ID: 033-00039
Reviewer: Adeel Yousuf / EVP
Date: July 2, 2007

Source-wide Potential Emissions Summary

Pollutant	Potential Emissions of Entire Source (Before Revision)	Potential Emissions due to Revision in Tanks Throughput	Potential Emissions of Entire Source (After Revision)
	(tons/year)	(tons/year)	(tons/year)
PM	1.32	-	1.32
PM-10	0.71	-	0.71
SO₂	4.65	-	4.65
NO_x	13.11	-	13.11
CO	7.73	-	7.73
VOCs	0.70	0.03	0.73
Highest Single HAP	0.17	negl.	0.17
Combined HAPs	0.18	negl.	0.18

Appendix A: Emission Calculations
Storage Tank and Truck Loading Losses
VOCs, PM, and CO

Company Name: Marathon Petroleum Company LLC
Address City IN Zip: 2670 US Highway 6, Waterloo, IN 46793
Permit Number: 033-24721
Plt ID: 033-00039
Reviewer: Adeel Yousuf / EVP
Date: July 2, 2007

Vapor Pressure of Asphalt using Antoine's Equation (AP-42 Section 11.1.2.5)

Equation: $\log P = (-0.05223 \cdot A)/T + B$		
Asphalt Temperature, T =	325.0 Fahrenheit	$\log P =$ -0.837
=	162.8 Celcius	Asphalt Vapor Pressure, P = 0.145 mmHg
=	399.9 Kelvin	= 1.91E-04 atm
A =	75350.06	= 2.81E-03 psia
B =	9.00346	Average Vapor Molecular Weight, M = 105 lb/lbmol (AP-42 Section 11.1)

Volatile Organic Compound (VOC) emissions from withdrawal and standing losses using US EPA TANKS Version 4.09 program

Storage Tank ID	Product Stored	Roof Type	Tank Dimensions	Average Liquid Height (gallons)	Maximum Tank Volume (gallons)	Turnovers per year	Product Throughput (gallons/yr)	VOC Withdrawal Losses (lbs/yr)*	VOC Standing Losses (lbs/yr)*	VOC Withdrawal Losses (tons/yr)	VOC Standing Losses (tons/yr)	
10-3	Asphalt	Fixed Cone	42.5 ft dia 40 ft ht	20.00	425,514	10.0	4,255,140	29.79	0	0.015	0	
25-1	Asphalt	Fixed Cone	60 ft dia 48.1 ft ht	20.04	1,019,736	14.0	14,276,304	49.97	0	0.025	0	
25-2	Asphalt	Fixed Cone	60 ft dia 48.1 ft ht	24.00	1,017,596	6.0	6,105,576	42.74	0	0.021	0	
80-4	Asphalt	Fixed Cone	110 ft dia 48 ft ht	24.00	3,431,463	2.0	6,862,926	36.03	0	0.018	0	
80-5	Asphalt	Fixed Cone	110 ft dia 48.1 ft ht	24.04	3,440,557	2.0	6,881,114	36.12	0	0.018	0	
80-6	Asphalt	Fixed Cone	110 ft dia 47.8 ft ht	23.88	3,343,106	2.0	6,686,212	35.08	0	0.018	0	
Totals								45,067,272	229.7	0	0.115	0

VOC Emissions from truck loading losses (AP-42 Section 5.2, Equation 1)

Equation: Loading Losses (lbs VOC/1000 gallons), $L = 12.46 \cdot S \cdot P \cdot M / T$	
Saturation Factor, S =	1.0
Asphalt Vapor Pressure, P =	2.81E-03 psia
Average Vapor Molecular Weight, M =	105 lb/lbmol (AP-42 Section 11.1)
Asphalt Temperature, T =	785.0 R
Truck Loading Losses, L =	0.00469 lbs VOC/1000 gallons of asphalt
Total Throughput =	45,067,272 gallons of asphalt/year
Truck Loading Losses, L =	211.4 lbs/year VOC
Truck Loading Losses, L =	0.11 tons/year VOC

Total VOC emissions from withdrawal, standing, and truck loading losses (tons/yr) = 0.22

Particulate Matter and Carbon Monoxide

AP-42 Table 11.1-14 was used to determine potential emission of organic particulate matter (PM) and carbon monoxide (CO). The following ratios were generated from silo filling assuming an asphalt temperature of 325oF and a volatility factor of -0.5:

Emission Factor (EF) Equations:	Asphalt Temperature = 325.0 F
Total PM = $0.000332 + 0.00105(-V) \cdot e^{((0.0251)(T+460)-20.43)}$	Asphalt Volatility Factor, V = -0.5
Organic PM = $0.00105(-V) \cdot e^{((0.0251)(T+460)-20.43)}$	Total PM/TOC = 4.8E-02 ton/ton of TOC
TOC = $0.0504(-V) \cdot e^{((0.0251)(T+460)-20.43)}$	Organic PM/TOC = 2.1E-02 ton/ton of TOC
CO = $0.00488(-V) \cdot e^{((0.0251)(T+460)-20.43)}$	CO/TOC = 0.097 ton/ton of TOC

ACRONYMS

TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound

Potential Emissions of Total PM =	1.1E-02 tons/yr*
Potential Emissions of Organic PM =	4.6E-03 tons/yr*
Potential Emissions of CO =	2.1E-02 tons/yr*

*Assuming TOC = VOCs from withdrawal, standing, & truck loading losses