MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

January 11, 2012

PERMIT TO INSTALL
197-10A

ISSUED TO
Marathon Petroleum Company LP

LOCATED AT
12700 Toronto Street
Detroit, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
A9831

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **October 12, 2011**	
DATE PERMIT TO INSTALL APPROVED: **January 11, 2012**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Common Abbreviations / Acronyms

Common Acronyms		Pollutant/Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
ANSI	American National Standards Institute	°C	Degrees Celsius
BACT	Best Available Control Technology	CO	Carbon Monoxide
CAA	Clean Air Act	dscf	Dry standard cubic foot
CEM	Continuous Emission Monitoring	dscm	Dry standard cubic meter
CFR	Code of Federal Regulations	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MIOSHA	Michigan Occupational Safety & Health Administration	PM10	PM less than or equal to 10 microns diameter
MSDS	Material Safety Data Sheet	PM2.5	PM less than or equal 2.5 microns diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pound per hour
NSPS	New Source Performance Standards	ppm	Parts per million
NSR	New Source Review	ppmv	Parts per million by volume
PS	Performance Specification	ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonably Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	THC	Total Hydrocarbons
SCR	Selective Catalytic Reduction	tpy	Tons per year
SRN	State Registration Number	µg	Microgram
TAC	Toxic Air Contaminant	VOC	Volatile Organic Compounds
TEQ	Toxicity Equivalence Quotient	yr	Year
VE	Visible Emissions		

* For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
    a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
    b) A visible emission limit specified by an applicable federal new source performance standard.
    c) A visible emission limit specified as a condition of this Permit to Install.

12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in R 336.1370(2). **(R 336.1370)**

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU_Asphalt	Eight-bay truck loading rack for asphalt cement, located in a partial enclosure. A carbon adsorption system reduces emissions from truck loading.	1978	NA
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

The following conditions apply to: EU_Asphalt

DESCRIPTION: Eight-bay truck loading rack for asphalt cement, located in a partial enclosure. A carbon adsorption system reduces emissions from truck loading.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT: Carbon adsorption system

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
SC I.1 applies until the AQD has approved the demonstration of satisfactory performance required by SC V.1.					
1. VOC	1872 pounds per month[1]	Calendar month	EU_Asphalt	SC VI.2, VI.5	R 336.1225, R 336.1702(a)
SC I.2 and I.3 apply on and after the date that the AQD approves the demonstration of satisfactory performance required by SC V.1.					
2. VOC	9.8 tons per year	Rolling 12-month time period as determined at the end of each calendar month	EU_Asphalt	SC VI.1, VI.2	R 336.1702(a)
3. Hydrogen sulfide	1.5 ppmv	Test protocol*	EU_Asphalt, emissions from SV-VRU1 and SV-VRU2	SC III.1, III.2, V.2	R 336.1224, R 336.1225
* Test protocol shall specify averaging time.					

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
SC II.1 applies until the AQD has approved the demonstration of satisfactory performance required by SC V.1.					
1. Asphalt cement loaded	724,000 gallons per day[1]	Calendar day	EU_Asphalt	SC VI.4	R 336.1225
SC II.2 applies at all times.					
2. Asphalt cement loaded	400,000,000 gallons per year	Rolling 12-month time period as determined at the end of each calendar month	EU_Asphalt	SC VI.2	R 336.1225, R 336.1702(a)

3. After the AQD has approved the demonstration of satisfactory performance required by SC V.1 and until implementation of the improved capture system on all eight bays of EU_Asphalt, the permittee shall limit the calendar day throughput on the bays without improved capture, in gallons, according to the mathematical statement below.[1] **(R 336.1225)**

$$\text{Uncapt\_DailyMax} \leq 724{,}000 \times \left(1 - \frac{\text{Capt\_DailyActual}}{4{,}608{,}000}\right)$$

Where:
Uncapt_DailyMax = Maximum allowed calendar day throughput on all bays without improved capture, in gallons
Capt_DailyActual = Calendar day throughput on all bays with improved capture, in gallons

4. After the AQD has approved the demonstration of satisfactory performance required by SC V.1 and until implementation of the improved capture system on all eight bays of EU_Asphalt, the permittee shall limit the rolling 12-month time period throughput on the bays without improved capture, in gallons, according to the mathematical statement below. **(R 336.1225, R 336.1702(a))**

$$\text{Uncapt\_AnnualMax} \leq \frac{9.8 \times 724{,}000 \times 365}{11.23} \times \left(1 - \frac{\text{Capt\_AnnualActual}}{400{,}000{,}000}\right)$$

Where:
Uncapt_AnnualMax = Maximum allowed rolling 12-month time period throughput on all bays without improved capture, in gallons
Capt_AnnualActual = Rolling 12-month time period throughput on all bays with improved capture, in gallons

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall implement and maintain the approved Malfunction Abatement Plan (MAP) for the truck loading rack and carbon adsorption system. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1702(a), R 336.1901, R 336.1910, R 336.1911)**

2. The permittee shall not operate EU_Asphalt unless an operating plan for the improved capture system and carbon adsorption system has been submitted within 60 days after completion of the installation of the improved capture system, and the plan is implemented and maintained. The operating plan shall include operating procedures and address other factors needed to ensure that the improved capture system attains optimum capture effectiveness. The permittee shall also amend the operating plan within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the operating plan and any amendments to the operating plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the operating plan or amended operating plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to attain optimum capture effectiveness. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

3. Before conducting the demonstration required by SC V.1, and no later than 90 days after issuance of Permit to Install No. 197-10A, the permittee shall submit amendments to the MAP to the AQD District Supervisor to address the following. **(R 336.1225, R 336.1702(a), R 336.1911)**

a. Monitoring the carbon adsorption system to maintain at least 95% emission control effectiveness for VOC and hydrogen sulfide emissions.
b. Timely replacing the carbon in the carbon adsorption system to maintain at least 95% emission control effectiveness for VOC and hydrogen sulfide emissions.

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate EU_Asphalt unless the carbon adsorption system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the carbon adsorption system includes maintaining and operating the system according to the approved MAP. **(R 336.1225, R 336.1910)**

2. The permittee shall limit the maximum throughput capacity of EU_Asphalt to 3,200 gallons per minute.[1] **(R 336.1225)**

3. On and after the date that the AQD approves the demonstration of satisfactory performance required by SC V.1, the permittee shall not operate EU_Asphalt unless the improved capture system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the improved capture system includes maintaining and operating the system according to the approved operating plan and achieving an estimated daily average capture effectiveness of at least 45% under all operating conditions. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. Within 90 days after commencement of trial operation of asphalt cement loading operations using the improved capture system, which consists of the installation of the improved capture system on at least two lanes, the permittee shall verify the capture effectiveness of the improved capture system by testing at owner's expense, in accordance with Department requirements. For purposes of this condition, testing shall consist of an audit and assessment by a party independent from the permittee and independent from the vendor of the equipment involved in the improved capture system. The audit and assessment shall consider equipment, procedures, implementation of procedures, and all other factors appropriate to verifying the capture effectiveness. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of capture effectiveness includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.1910)**

2. Within 120 days after commencement of trial operation of asphalt cement loading operations using the improved capture system, the permittee shall verify hydrogen sulfide emission rates and that the carbon adsorption system attains at least 95% reduction of hydrogen sulfide and volatile organic compound emissions by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission reduction includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2001, R 336.2003, R 336.2004)**

3. No later than July 1, 2012, at each lane for which the improved capture system has not commenced trial operation, the permittee shall verify that the 24-hour average hydrogen sulfide concentration in the hatchways during transfer for EU_Asphalt does not exceed 30 ppmv by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[1] **(R 336.1225)**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall calculate the VOC emission rate from EU_Asphalt monthly, for the preceding 12-month rolling time period, using a method acceptable to the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1702(a))**

2. The permittee shall record the amount of asphalt cement loaded for EU_Asphalt monthly, for the preceding 12-month rolling time period, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

3. The permittee shall keep, in a satisfactory manner, a record of the specifications of the pumps that transfer material at EU_Asphalt and an analysis showing the maximum pumping rate for EU_Asphalt. The permittee shall keep the record on file at the facility and make it available to the Department upon request.[1] **(R 336.1225)**

4. Until the AQD has approved the demonstration of satisfactory performance required by SC V.1, the permittee shall record the amount of asphalt cement loaded for EU_Asphalt daily, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

5. Until the AQD has approved the demonstration of satisfactory performance required by SC V.1, the permittee shall calculate the VOC emission rate from EU_Asphalt monthly, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**

6. After the AQD has approved the demonstration of satisfactory performance required by SC V.1 and until implementation of the improved capture system on all eight bays of EU_Asphalt, the permittee shall record the following each calendar day, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request.[1] **(R 336.1225)**
   a. The amount of asphalt cement loaded during the calendar day for all EU_Asphalt bays with improved capture.
   b. The amount of asphalt cement loaded during the calendar day for all EU_Asphalt bays without improved capture.
   c, The calculated maximum allowed calendar day throughput according to the mathematical statement in SC II.3.

7. After the AQD has approved the demonstration of satisfactory performance required by SC V.1 and until implementation of the improved capture system on all eight bays of EU_Asphalt, the permittee shall record the following monthly, in a satisfactory manner. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1225, R 336.1702(a))**
   a. The amount of asphalt cement loaded for all EU_Asphalt bays with improved capture during the month and the rolling 12-month time period ending that month.
   b. The amount of asphalt cement loaded daily for all EU_Asphalt bays without improved capture during the month and the rolling 12-month time period ending that month.
   c, The calculated maximum allowed rolling 12-month time period throughput according to the mathematical statement in SC II.4.

VII. REPORTING

1. Within 30 days after completion of the installation of the improved capture system, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of asphalt cement loading operations using the improved capture system. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID +	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-VRU1	8[1]	14[1]	R 336.1225
2. SV-VRU2	8[1]	14[1]	R 336.1225
+ Emissions from these stacks may be discharged at an angle other than vertical.			

IX. OTHER REQUIREMENTS

No additional requirements

Footnotes:
[1]This condition is state only enforceable and was established pursuant to Rule 201(1)(b).