



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korteski, Director

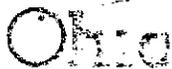


1IN0002520100902

HAMILTON

MARATHON PETROLEUM LLC CINCINNATI
TERMINAL

PIEKUTOWSKI, MA 2010/09/02



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

September 2, 2010

Mr. Dennis Stauffer
Marathon Petroleum Company LLC
Cincinnati Light Oil Terminal
4015 River Road
Cincinnati, Ohio

**Re: Marathon Petroleum Cincinnati Light Oil Terminal -- OH0009598;
1IN00025*FD CEI/Pre-Permit Inspection**

Dear Mr. Stauffer:

On August 10, 2010, I met with Steve Chalupa, Brianah Morse, Jackie O'Flaherty, and yourself to conduct a compliance evaluation inspection (CEI) and a pre-permit inspection at the Marathon Petroleum Cincinnati Light Oil Terminal facility. The purpose of this inspection was to evaluate compliance with the terms of the NPDES permit, and to verify the information in the facility's NPDES renewal application. Please note that the report, by its format, tends to highlight negative areas.

As indicated on the attached NPDES Compliance Inspection Report, all areas that were evaluated received a satisfactory rating.

Thank you and your staff for the time extended during the inspection. If you have any questions, please contact me at 937.285.6108.

Sincerely,

Marianne Piekutowski
Environmental Specialist 2
Division of Surface Water

Enclosures

Cc: Steve Chalupa, Marathon Petroleum Company LLC
Jackie O'Flaherty, Marathon Petroleum Company LLC Cincinnati Light Oil Terminal



State of Ohio Environmental Protection Agency
Southwest District Office

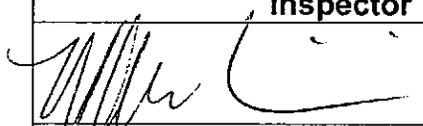
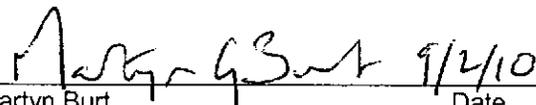
NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
OH0009598	11N00025*FD	8/10/2010	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Marathon Petroleum LLC Cincinnati Light Oil Terminal 4015 River Road Cincinnati, Ohio 45204	9:45 am	9/1/2005
	Exit Time	Permit Expiration Date
	12:00 pm	8/31/2010
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Steve Chalupa, Adv.HES Professional	606.329.4335	
Dennis Stauffer, Terminal Manager	513.451.0485x237	
Jacqueline O'Flaherty, Terminal Supervisor	513.451.0485x242	
Brianah Morse, Intern		
Name, Address and Title of Responsible Official	Phone Number	
Dennis Stauffer, Terminal Manager Marathon Petroleum Company LLC 4015 River Road Cincinnati, Ohio 45204	513.451.0485x237	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	N	Laboratory	N	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	N	Sludge Storage/Disposal	N	Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)
See attached report.

Inspector	Reviewer
	
Date: 9/21/10	Date: 9/24/10
Marianne Piekutowski Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters..... Y
- (c) Do Categorical Standards apply?...If yes, list applicable standards.. NA

NA
- (d) Product(s) and production rates conform with permit application (Industries)..... Y
- (e) Flows and loadings conform with NPDES permit..... Y
- (f) Treatment processes are as described in permit application... Y
- (g) All discharges are permitted..... Y
- (h) Number and location of discharge points are as described in permit..... Y
- (i) Storm water discharges properly permitted..... Y

Comments/Status:

a) There may be a name change in the fall, but currently correct.

Section F: Compliance

- (a) Any significant violations since the last inspection..... N
- (b) Appropriate Non-compliance notification of violations..... NA
- (c) Permittee is taking actions to resolve violations..... NA
- (d) Permittee has a compliance schedule..... NA
- (e) Compliance schedule contained in...N/A
- (f) Permittee is in compliance with schedule..... NA
- (g) Has biomonitoring shown toxicity in discharge since last inspection NA

Comments/Status:

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator or dual feed NA

i. What does the back-up power source operate.....

NA

ii. How often is the generator tested under load.....

NA

(b) Which components have an alarm system available for power or equipment failures.....

NA

(c) All treatment units in service other than backup units..... NA

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

NA

(e) Any major equipment breakdown since last inspection..... NA

(f) Operation and maintenance manual provided and maintained..... NA

(g) Any plant bypasses since last inspection..... NA

(h) Any plant upsets since last inspection..... NA

Comments/Status:

No treatment.

Section H: Sludge Management

(a) Method of Sludge Disposal...
 NA

- Land Application
- Haul to Another NPDES Permittee
- Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.

Class A - Exception Quality Sewage Sludge (monitoring station 584)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized Solids	Option 8 - >75% Percent Solids with Unstabilized Solids
Alternative 1 - Time and Temperature Regime (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 - Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Gamma ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Class B Sewage Sludge (monitoring station 581)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized	Option 8 - >75% Percent Solids with Unstabilized	Option 9 - Land Injection	Option 10 - Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (a) Has amount of sludge generated changed significantly since the last inspection..... NA
- (b) How much sludge storage is provided at the plant.....
- (c) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... NA
- (d) Any complaints received in last year regarding sludge..... NA
- (e) 5/8" screen at headworks for facilities that land apply sludge..... NA
- (f) Are sludge application sites inspected to verify compliance with NPDES permit..... NA
- (g) Is a contractor used for sludge disposal..... NA
 If so, what is the name of the contractor.....

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices operated and maintained..... NE
Type of device (e.g. weir with ultrasonic level sensor):

The flows are estimated. Collect a known quantity over time. Storm water from diked areas.
--
- (b) Calibration frequency adequate NA
(Date of last calibration:)
- (c) 24-hour recording instruments operated and maintained..... NA
- (d) Flow measurement equipment adequate to handle full range of flows..... NA
- (e) Actual flow discharged is measured..... Y
- (f) Flow measuring equipment inspection frequency
Daily Weekly monthly other

Comments/Status:

f) This is done at least monthly.

Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
(see GLC page)
- (d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

d) Noted of file folder for records retention policy.

Section I: Self-Monitoring Program (con't)

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... Y
- (b) Do SOP's include the following if applicable..... Y
- | | |
|------------------------------------|-----------------------------|
| • Title | • Procedure |
| • Scope and Application | • Calculations |
| • Summary | • Quality Control |
| • Sample Handling and Preservation | • Maintenance |
| • Interferences | • Corrective Action |
| • Apparatus and Materials | • Reference (Parent Method) |
| • Reagents | |

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of known precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (d) If alternate analytical procedures are used, proper approval has been obtained..... N
- (e) Analyses being performed more frequently than required by permit. N
- (f) If (e) is yes, are results in permittee's self-monitoring report..... NA
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y
(see score from GLC page)
- (h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: **Oil & Grease, PAHs, BTEX**
Lab name: **Marathon Refining Analytical Development (RAD) Dept.**

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling..... Y
Date:
- (b) Were any parameters "Unsatisfactory"..... ?
- (c) Reasons for "Unsatisfactory" parameters.....

NA

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall # 001

Outfall Description: Final outfall. A vitrified clay pipe coming out of a headwall. There was no discharge the day of the inspection. Outfall signage is up at fence to prevent it from being washed away when Ohio River rises.

Receiving Stream: Ohio River

Receiving Stream Description: Warmwater habitat. Bathing water.

Outfall # 002

Outfall Description: Final outfall. Discharge valve at tank farm. Closed, chained and locked. Headwall onto bank of Ohio River. There was no discharge on the day of the inspection. Outfall signage is up at fence to prevent it from being washed away when Ohio River rises.

Receiving Stream: Ohio River

Receiving Stream Description: Warmwater habitat. Bathing water.

Outfall # 003

Outfall Description: Final outfall. Nothing is stored in this area. Discharge comes out onto grassy area. There was no discharge on the day of the inspection. Outfall signage is up at fence to prevent it from being washed away when Ohio River rises.

Receiving Stream: Ohio River

Receiving Stream Description: Warmwater habitat. Bathing water.

Outfall # 004

Outfall Description: Final outfall. There was no discharge on the day of the inspection. Outfall signage is up at fence to prevent it from being washed away when Ohio River rises.

Receiving Stream: Ohio River

Receiving Stream Description: Warmwater habitat. Bathing water.

Comments/Status:

The discharges usually associated with storm water. Prior to any waters being discharged from the tank farm areas, there is a visual inspection prior to opening the valves. If there is a sheen, the collected water is not discharged.

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
- (b) Do you notice staining or discoloration of soils, pavement or floors.. N
- (c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
- (d) Do you see unidentified dark smoke or dust clouds coming from

- sources other than smokestacks..... N
- (e) Do you notice any unusual odors or strong chemical smells..... N
- (f) Do you see any open or unmarked drums, unsecured liquids, or
damaged containment facilities..... N

If any of the above are observed, ask the following questions:

- (1) What is the cause of the condition?
- (2) Is the observed condition or source a waste product?
- (3) Where is the suspected contaminant normally disposed?
- (4) Is this disposal permitted?
- (5) How long has the condition existed and when did it begin?

Comments/Status:

Permit # : OH0009598
NPDES #: 11N00025*FD

● General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Balance	Acceptable?		NR
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used. ³	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams ⁴	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments: :

Criteria	Standard Methods Requirement		Rating
Drying Oven (Suspended Solids)	Acceptable?		NR
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer / equipment ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.5° C increments ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° F ⁴	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Comments: :

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• Logbook maintained ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: : ***The facility does a three point titration. A column should be added to the logbook to allow for the slope to be recorded.***
The pH meter is calibrated each time it is used.
The facility has sampling guidelines included with each sample kit.
There is also a Calibration troubleshooting guidance provided.
A field data sheet is used and sent to the RAD Lab.

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• Calibration Method	• Air or known DO calibration method ¹⁰	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• Calibration per manufacturer specification ¹⁰	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement		Rating	
Incubator (CBOD/ E-Coli)	Acceptable?			
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use ¹ (E-Coli)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• Temperature checked / recorded daily ² (CBOD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ^{o12}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ^{o22}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature correction information posted on incubator ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb) ²³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature Log (thermometer reads to 0.5 Celsius). ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: :

Criteria	Standard Methods Requirement		Rating	
Refrigerator	Acceptable?			
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.5 Celsius). ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer held in water bath. ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius. ¹³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. ¹⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification ¹⁶	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained. ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: :				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Ammonia Meter				
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
		• Log book being maintained ²	<input type="checkbox"/> Yes	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec. ¹⁷	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
		• Standards used for calibration not expired	<input type="checkbox"/> Yes	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ¹⁸	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: :				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				NR
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴ NA	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized ¹⁴ NA	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• SOP for cleaning of sampling equipment NA	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook being maintained ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

There is a written procedure for the collection of each sample.

All of the parameters at this location are a grab sample so there is no composite sampler.

There is a written SOP for each parameter. There is not a copy of the parent method at the facility.

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				NR
• General criteria	• Properly working seals.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets				NR
• General criteria	• Date(s) ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Analyst initials ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Blue or black ink pen ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration information ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Hot Water Bath (Fecal Coliform/E. Coli)				
• Temperature Recordkeeping	• Temperature Log (thermometer reads 0.2° C) ²¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• Incubator temperature 44.5° C ± 0.2° ^{21/24}			
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1,5}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Autoclaves/Steam Sterilizers				
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C ²⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NR
	• 10 to 30 minutes time based on material being sterilized ²⁶	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust. ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Final Effluent Temperature Monitoring	Acceptable?		
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	NR
	• Thermometer reads in increments of at least 0.1° C ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			
Number of Criteria Rated:			Acceptable
			Marginal
			Unacceptable
			Total Number of Areas Rated
			0
<p>Acceptable Ratings – No action required (recommend SOP's written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).</p>			
<p>Marginal Ratings – Improvements required, written response required (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).</p>			
<p>Unsatisfactory Rating - Improvements required, written response required, NOV issued (recommend SOP's be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).</p>			
Consider recommending PAI Audit from DES when:		>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable	

Notation of Referenced Method

- | | |
|----------------------------|------------------------------|
| 1 Method 9020-B, Item 3 | 14 Method 1060A, Item 1 |
| 2 Method 1020-A, Item 1 | 15 Method 4500-CI I, Item 2 |
| 3 Method 1020-B, Item 10 | 16 Method 4500-CI I, Item 4 |
| 4 Method 2540-B, Item 2 | 17 Method 4500-NH3 D, Item 4 |
| 5 Method 2550-B, Item 1 | 18 Method 4500-NH3 D, Item 2 |
| 6 Method 1020-A, Item 1 | 19 Method 1060-B, Item 2 |
| 7 Method 4500-H B, Item 4 | 20 Method 1060-B, Item 1 |
| 8 Method 4500-H B, Item 2 | 21 Method 9222D, Item 1 |
| 9 Method 1020-B, Item 2 | 22 Method 9223 B, Item 2 |
| 10 Method 4500-O B, Item 3 | 23 Method 9223 B, Item 3 |
| 11 Method 4500-O G, Item 3 | 24 Method 1603, Item 2 |
| 12 Method 5210-B, Item 5 | 25 Method 9030-B, Item 3 |
| 13 CFR 136.3, Table II | 26 Method 9020 B, Table IV |

General Lab Criteria

Equipment Logbook Content - all maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

Preservation and Holding Times						
Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO ₃ to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}\text{C}$ If chlorine present, add sodium thiosulfate tablet	6 hrs transport Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH ₃ D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105 °C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std Method 4500-O G
pH, Electrometric Method	Std Methods 4500-H+ B
Fecal Coliform, Membrane Filter Procedure	Std Methods 9222D
Escherichia Coli, Enzyme Substrate Test	Std Method 9223B
Escherichia Coli Membrane Filtration Procedure	EPA Method 1603
Oil and Grease	USEPA 1664A or Std Methods 5520B
Metals, general	USEPA 200, Std Methods 3111B or C, or 3120B
Volatiles (Purgeables by purge and trap)	USEPA 6210, Std Methods 624
Semi-Volatiles (Base/Neutrals and acids)	USEPA 6410, Std Methods 625
Pesticides	USEPA 6410 and 6630, Std Methods 608

**MARATHON PETROLEUM COMPANY, LLC
CINCINNATI LIGHT OIL TERMINAL
NPDES COMPLIANCE EVALUATION/PRE-PERMIT INSPECTION
DATE OF INSPECTION: August 10, 2010**

ITEMS FOR DISCUSSION:

The facility submitted its renewal application as required. The NPDES permit was drafted shortly after the inspection.

COMPLIANCE EVALUATION:

The facility transitioned between Oil and Grease sample methods in the November/December 2008 timeframe. In those two months, the facility completed the Freon extraction method instead of the Hexane extraction method. Because of this, it shows up as no Oil & Grease, Hexane samples taken at outfall 002, 003 and 602. This was corrected in January 2009. All other data showed compliance.

OBSERVATIONS:

Marathon Petroleum LLC Cincinnati Light Oil Terminal (Marathon) has storage tanks for organic chemicals, gasoline, diesel, and used oil storage. The facility can off-load the chemicals from barges and then store the materials. From the storage tanks, materials can be loaded into tanker trucks and rail cars for transportation. The used oil is off-loaded from tanker trucks and loaded onto barges where it is then transported for re-refining.

The facility's outfalls each drain a specific area of the process. Outfall 001 covers the portion of the facility involved in the loading and unloading of the gasoline tanks. This area discharges to the Ohio River. This area has a covered tanker truck loading area that drains to an oil/water separator. The area also has a vapor recovery system for collecting the vapors associated with the loading of the trucks. This area is also under roof, and has been sloped to allow any material that is under the roof to drain to the separator and the area that is not under the roof is sloped away from the separator. Outfall 001 also contains the catch basins located within the diked tank farm. This basin is valved normally closed. This will allow the storm water to collect to check for any spilled material prior to discharging to the Ohio River. The discharge from the separator is also piped to outfall 001, but it does not flow through the catch basins in the diked area. The vapor recovery unit can also discharge, in the event of an emergency, to the catch basins within the diked areas. The discharge could also occur from the knockout tank. The normal procedure, however, is to send the discharge from the knockout tank to the slop tank for the facility. The sampling outfall for this area was changed as part of the last permit renewal. Outfall 601 is used as an internal monitoring station for the storm water discharging from the office parking lot area. This outfall is free of any process waters. Outfall 602 is the internal monitoring station discharging from the oil/water separator. There is also an internal monitoring station 603 that is used when

Marathon Petroleum Cincinnati Light Oil Terminal -- Page 2

there are treated waters discharged into 001 from flooding and tank ballast. There was a new separator/crock installed for the parking lot/office building area. This was a replacement of an old crock. The installation was almost complete on the day of the inspection. The facility was waiting for the pavement to be repaired over the excavated area. This was done to alleviate flooding in this area.

Outfall 002 covers the portion of the facility dealing with the chemical loading and unloading. The western most portion of this outfall has been routed to its own outfall. This new discharge location is called Outfall 004. This was done so hoses did not have to be run across the access road at the facility. This was not a new flow, it was a re-routing of an existing discharge. Chemicals stored in these areas include acetone, methyl ethyl ketone, and methanol. The unloading dock for the barges is near this outfall. In addition to unloading its own materials of its own, Marathon also unloads material for Valvoline and pipes it to the Valvoline facility. The truck loading area for this section also drains to an oil/water separator prior to discharging to the Ohio River. The tanks are in diked areas that drain to catch basins. The final catch basin is valved to contain the storm water. This would allow any sheens or spilled materials to be captured prior to discharging to waters of the State. The facility also has the ability to load off-spec material back onto the barges.

Outfall 003 drains the old Texaco facility. It also drains to the Ohio River. The facility is currently not using the tanks in this area. At the present time, the facility is determining what will be done with these tanks. They have been used for lube oil. They may be used for jet fuel or another oil in the future. These tanks do not have the vapor recovery system necessary for gasoline. The load rack for this area has been decommissioned. The oil/water separator has been removed. If loading would occur in this area, then a new rack area would be put into place. These four lube tanks have product transferred in and out on barges. There is still nothing being stored in this area.

The largest source of wastewater from the facility is the storm water. The sanitary flow from the facility discharges to MSD of Greater Cincinnati. There is also hydrostatic test water generated on-site. The facility's NPDES permit allowz for this discharge. In addition, the facility's NPDES permit also allows for tank ballast water to be discharged in the event of river flooding. The tank ballast water would be put into the tanks to prevent them from floating off their bases and floating down the river. The ballast water would be treated prior to discharge.

Marathon will be removing the old train loading areas. There are six to eight abandoned areas. There are newer areas that will remain in place. There were changes made to the loading area tributary to outfall 001. These mainly affected the vapor recovery system. There are approximately 60 trucks a day loaded. The number of trucks loaded is based on the vapor recovery system and its ability to meet air quality limitations.

Marathon Petroleum Cincinnati Light Oil Terminal -- Page 3

The facility is now storing ethanol for fuel at the terminal. There is a black mold/fungus growing on these tanks. This is related to the food source the ethanol provides. This does not appear to be impacting the discharge

The facility is now monitoring using the Hexane extraction method for Oil and Grease. This was noted in the 2008 inspection as an item requiring action. The General Laboratory Criterion were also reviewed during this inspection. There are two recommendations being made related to this. The first recommendation is the facility should have a copy of the parent method for the parameters analyzed on-site. There is a Standard Operating Procedure (SOP) for the pH, but not a copy of the 40 CFR 136 method. The second recommendation is the facility add a column to record the slope for the pH meter and test method in its logbook.

The facility has installed outfall signage on its outfalls. The facility has located the signs on the property fencing. This is to prevent the signs from being washed away when the Ohio River rises.



11-11-11