

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility : MARATHON PETROLEUM COMPANY LP	SRN : A9831
Location : 1001 S Oakwood	District : Detroit
	County : WAYNE
City : DETROIT State: MI Zip Code : 48217	Compliance Status : Non Compliance
Source Class : MEGASITE	Staff : Jorge Acevedo
FCE Begin Date : 10/1/2017	FCE Completion Date : 9/30/2020
Comments : Consent Order is being finalized	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
09/30/2020	CEM RATA	Compliance	Marathon submitted results of a RATA of the CEMS at the Light Products Terminal. Results showed the monitor has passed the required 10% relative accuracy.
09/30/2020	MACT (Part 63)	Compliance	Submittal of Semi-Annual MACT Report- No CMS > 5%. RATA was conducted on June 21, 2018. No equipment leaks not repaired within 5 days after detection. RATA was performed on June 25, 2020. CGA was done on March 18, 2020. No leaks not repaired within 5 days after detection.

Activity Date	Activity Type	Compliance Status	Comments
09/14/2020	Rule 912	Non Compliance	<p>Because of low feed and reduced charge rates, the amount of coke buildup on the catalyst which impacts Regenerator temperature. In a previous 912 report, the facility increased the addition of CO combustion promotor to the FCCU Regenerator. This was found not to decrease CO on a consistent basis alone. On June 29, 2020, facility returned to normal CO combustion promotor addition rates. They also added a temporary jumper to recycle slurry into the FCCU Reactor feed. This increased regenerator temperatures and improved combustion efficiency. Together, the facility believes that is what led to the lowering of CO levels. AQD will monitor this to determine if any future action is warranted.</p>
09/10/2020	Rule 912	Non Compliance	<p>Because of reduced charges at the FCCU since late March, FCCU has been operating at lower temperatures. CO emissions have been higher than normal. 44 hours of CO exceedances occurred intermittently between June 16 and June 26. Additional CO promotor chemical was added and a temporary slurry recycle jumper was added to raise the process temperature. 44 hours equates to around 2% for the quarter. A HPV would be at 168 so this amount of hours is elevated, but does not reach the point of a HPV. Facility believes they have a solution to prevent this in the future. AQD will evaluate current situation to determine if a trend continues.</p>
09/04/2020	Excess Emissions (CEM)	Compliance	<p>57 analyzers were included in this report. Marathon reported that excess emissions were below 1% for the quarter for all CEMS during 2nd Quarter 2020 except for FCCU Regen CO analyzer . This was mainly caused by low feed rates. Marathon ultimately determined how to handle this situation. The analyzer will be monitored in future reports to determine if action is necessary. It was at 2.01% for the quarter. CEMS were all below 5% downtime for the 2nd Quarter.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/18/2020	Stack Test Observation		CCR Interheater Stack Test
08/14/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the Crude/Vacuum Heater NO. 2 on June 23, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- -0.02----- less than 1.0% Absolute average difference (AAD)</p> <p>NOx(ppm @ 0% O2) ----- -----0.6% -----less than 20% of RM.</p> <p>NOx(lb/MMBTU) ----- ---0.6% -----less than 20% of RM.</p> <p>Crude Unit averaged 81000 BPD. Crude Heater averaged 115 MMBTU/hr Vac Heater averaged 68 MMBTU/hr</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/14/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the B&W Boiler on June 23-24, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- -3.67----- less than 10% of RM NOx(ppm @ 0% O2) ----- -----3.22% -----less than 10% of RM. NOx(lb/MMBTU) ----- ---4.89% -----less than 10% of RM.</p> <p>B&W Boiler averaged around 250 MMBTU/hr. Steam Production averaged 180 m#/hr</p> <p>Results were below permit limits.</p>
08/14/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the Vacuum Heater 2 on June 16-17, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- -----0.22----- less than +/- 1.0% dv NOx(ppm @ 0% O2) ----- -----11.4% -----less than 20% of RM. NOx(lb/MMBTU) ----- ---11.4% -----less than 20% of RM.</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/14/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the East and West Plant Fuel Gas CEMS on June 09-10, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016. Pollutants tested were : H2S</p> <p>RATA Results were</p> <p>East Plant H2S (ppmwv)----- ---1.8% -----less than 10% of standard</p> <p>West Plant H2S (ppmwv)----- ---1.1% -----less than 10% of standard</p> <p>Results were below permit limits.</p>
08/13/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the GOHT Heater NO. 2 on June 15-16, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- 0.30----- less than 1.0% Absolute average difference (AAD)</p> <p>NOx(ppm @ 0% O2) ----- -----4.29% -----less than 20% of RM.</p> <p>NOx(lb/MMBTU) ----- ---4.0845% -----less than 20% of RM.</p> <p>GOHT Heater Duty operated on average of 26 MMBTU/hr. Charge Rate averaged 32,000 BPD</p> <p>Results were below permit limits.</p>
08/12/2020	NSPS (Part 60)	Compliance	<p>Quarterly Cylinder Gas Audit- Performed June 12, 2020. High and low range for NOx and CO performed within 5% of Audit Gas.</p>

Activity Date	Activity Type	Compliance Status	Comments
08/12/2020	Excess Emissions (CEM)	Compliance	Excess Emission Report Submitted by Air Products- There were no excess emissions reported for 2nd Quarter 2020 for NOx and CO emission limits.
08/12/2020	NSPS (Part 60)	Compliance	Tank 55 was found to have product on the roof on July 3, 2020. Notification was received via telephone. Marathon drained the tank and removed contents from roof. Facility will empty and degas tank and then conduct an up-close seal inspection to determine required repairs. Notification meets criteria of 60.113b(a)(5) because the tank emptying and filling was unplanned.
08/11/2020	Stack Test Observation	Compliance	Coker Heater
08/10/2020	NESHAP (Part 61)	Compliance	1st Quarter LDAR, Benzene Waste NESHAP, and QQQ Report. See Activity Report CA_A983154528
08/10/2020	Other	Compliance	First Quarter 2020 LdAR, Benzene Waste NESHAP, and QQQ Report
07/01/2020	NESHAP (Part 61)	Compliance	Annual BWON Report- Annual TAB - 48.11 Mg, 6BQ- 2.75 Mg.
06/25/2020	CEMS Test Observation	Compliance	VRU CEMS RATA
06/25/2020	Complaint Investigation	Compliance	complaint Investigation
06/25/2020	Scheduled Inspection	Compliance	MPLX Terminal
06/16/2020	CEMS Test Observation		
06/12/2020	Other Non ROP	Compliance	2019 Annual DHOP Annual Emissions and Net Actual Emissions Increase Summary for 2019. Results continue to show that significant net increase did not occur as a result of DHOP.
06/12/2020	ROP Annual Cert	Compliance	No deviations reported for the reporting period.
06/12/2020	ROP SEMI 2 CERT	Compliance	No deviations reported for the reporting period.

Activity Date	Activity Type	Compliance Status	Comments
06/12/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the FCCU Regenerator on March 3, 2020, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2, CO2, SO2, NOx, and CO</p> <p>Test Results were:</p> <p>O2(%dv)----- 0.34----- less than 1.0% Absolute average difference (AAD)</p> <p>CO2(%dv)----- 0.25----- less than 1.0% AAD</p> <p>SO2(ppm @ 0% O2) ----- -----15.5% -----less than 20% of RM.</p> <p>NOx(ppm @ 0% O2) ----- -----0.45% -----less than 20% of RM.</p> <p>CO(ppm @ 0% O2) ----- -----3.2% -----less than 10% of RM.</p> <p>FCCU operated on average a charge rate of 45000 BPD. Coke Burn rate averaged 22,000 lb/hr, with ammonia injection averaging 42.6 lb/hr.</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
06/12/2020	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test on the FCCU Regenerator on March 3, 2020 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum.</p> <p>Pollutants tested were : PM, PM10, NH3, H2SO4, and VOC</p> <p>Results were PM (lb/1000lb coke)----- -----0.26 -----less than 0.8 PM10(lb/1000 lb coke)----- -----0.59-----less than 1.1 NH3conc(ppm)----- -----12 NH3 slip(lb/hr)----- -----2.4 lb/hr H2SO4(lb/1000 lb coke)----- -----0.018-----no limit VOC(lb/1000 lb coke)----- -----0.033-----no limit VOC(TPY)----- -----3.3-----less than 21</p> <p>FCCU Charge Rate averaged 45000 bpd Coke Burn Off rate averaged 22400lb/hr, with ammonia injection averaging 44.3 lb/hr.</p> <p>Results were below permit limits.</p>
06/09/2020	CEMS Test Observation		West Plant H2S Fuel Gas RATA
06/03/2020	Complaint Investigation	Compliance	Complaint investigation
05/29/2020	MAERS	Compliance	<p>MAERS REPORT SUBMITTED</p> <p>For FCCU, changed PM 10 filterable- appears that it was over reported by a factor of 10. Added formaldehyde emissions for FCCU - Used Table 5-4 of EPA's "Emissions Estimation Protocol for Petroleum Refineries Version 3 April 2015. Spot checked several emission unit calculations and the emissions appeared to be correct.</p>
05/28/2020	ROP Annual Cert	Non Compliance	Air Products had two deviations related to downtime for the CEMS. This information was also submitted during quarterly reports.

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05/18/2020	Other Non ROP	Compliance	Request for reduced frequency for delayed coker. The title V permit required 5 annual tests before company could ask for a reduced schedule. Facility passed six annual tests with enough cushion to allow for reduced frequency. Email approval was sent on May 18, 2020.
05/15/2020	Stack Test	Compliance	Marathon performed stack testing on the B&W Boiler on March 5, 2020, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM and VOC Test Results were: PM (lb/MMBTU) ----- -0.0013----- below limit of 0.0019 VOC (lb/MMBTU)----- ---0.0010-----below limit of 0.0055 Firing Rate averaged 278 MMBTU/hr Steam Load averaged 124 mlb/hr All results were below permit limits
05/14/2020	Excess Emissions (CEM)	Compliance	57 analyzers were included in this report. Marathon reported that excess emissions were below 1% for the quarter for all CEMS during 1st Quarter 2020. CEMS were all below 5% downtime for the 1st Quarter.
05/14/2020	NSPS (Part 60)	Compliance	1st Quarter '20 Cylinder Gas Audit - Each test passed
05/14/2020	Excess Emissions (CEM)	Compliance	Air Products Excess Emission Reports for 1st Quarter 2020. No excess emissions for NOx (lb/MMBTU and ppm) and CO. Downtime was less than 1%.
05/12/2020	MAERS	Compliance	Air Products MAERS Submittal.

Activity Date	Activity Type	Compliance Status	Comments
05/01/2020	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the FCCU Regenerator on March 3-4, 2020, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : PM, PM10, VOC, O2, CO2, SO2, NOx, and CO</p> <p>Test Results were:</p> <p>PM (lb/Mlb coke) ----- --0.26----- below limit of 0.8</p> <p>PM10(lb/Mlb coke)----- --0.59-----below limit of 1.1</p> <p>VOC (lb/hr)----- -----0.750(translates to 3.3 TPY) ----- below limit of 21 TPY</p> <p>Coke Burn averaged 22.4 lb/Mlb coke/hr FCC Rate averaged 45000 ppd Aqueous NH3 Injection (lb/hr) 44.3 ESP- Both Operating</p> <p>RATA Results were:</p> <p>O2(%dv)----- ---0.34-----less than 1.0% absolute average difference</p> <p>CO2(%dv)----- --0.25-----less than 1.0% absolute average difference</p> <p>SO2(ppm @0%O2)----- ---15.5%-----less than 20% of RM</p> <p>NOx(ppm @0%O2)----- ---0.45%----- less than 20% of RM</p> <p>CO(ppm @0%O2)----- -----3.2%----- less than 10% of RM</p> <p>All results were below permit limits</p>
04/27/2020	Other	Compliance	4th Quarter 2019 LDAR, BWON, and QQQ Report.
04/27/2020	Other Non ROP	Compliance	4th Quarter 2019 LDAR, BWON, QQQ Report. See Activity Report CA_A983153447.

Activity Date	Activity Type	Compliance Status	Comments
04/02/2020	NSPS (Part 60)	Compliance	30 day notice of external floating roof secondary seal inspections. Facility will be conducting inspections of external floating roof tank seals of Tanks 108 and 128. Inspections are scheduled to take place on or after March 6, 2020.
04/01/2020	Other Non ROP	Compliance	Fugitive Dust Control Plan was submitted on February 27, 2020. The plan was updated by adding requirements from the newly enacted Detroit Bulk Solid Material Ordinance.
04/01/2020	NSPS (Part 60)	Compliance	Submittal of Semi-Annual QQQ and GGGa/VVa Report. Drains were monitored for low levels. Components were monitored and leaks were repaired within the 15 day timeframe.
04/01/2020	Other Non ROP	Compliance	2019 Annual DHOP Annual Emissions and Net Actual Emissions Increase Summary for 2019. Results continue to show that significant net increase did not occur as a result of DHOP.
03/31/2020	Other Non ROP	Compliance	TPU Staff, M. Dziadosz, responded to the facility, via memo, that AQD had reviewed the H2S CEMS report regarding the Crude Flare and reported that the facility satisfied the annual RATA requirement in 40 CFR 60 , Appendix B.
03/30/2020	Other Non ROP	Compliance	Memo from T. Gasloli, TPU, re: Marathon Petroleum Crude/Vac Heater Stack Tests. TPU recommends that Marathon can meet PM emission limit without subtracting H2SO4. Next test plan approval will state that the option to subtract H2SO4 will no longer be available.

Activity Date	Activity Type	Compliance Status	Comments
03/19/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the FCCU Regenerator on March 12, 2019 to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2, CO2, SO2, CO, and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- 0.26----- less than +/- 1.0% dv CO2(%dv)----- 0.31-----less than +/- 1.0%dv SO2(ppm@0%O2)-----0.1- -----less than 10% of Appl. Std NOx(ppm@0%O2) ----- ----4.1% ----- less than 20% of RM. CO (ppm@0%O2) ----- -----0.9-----less than 10% of RM</p> <p>Results were below permit limits.</p>
03/19/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the H2S analyzer for the Crude and Alky Flare on October 22, 2019 to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :H2S</p> <p>Test Results were:</p> <p>Alky Flare H2S(ppmdv)----- -----0.6%----- less than 10% of Standard</p> <p>Crude Flare H2S(ppmdv)----- -----4.9%----- -less than 20% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/19/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the B&W Boiler on April 16-17, 2019, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2, CO2, CO, and NOx</p> <p>Test Results were:</p> <p>O2(%dv)----- 0.88----- less than +/- 1.0% dv</p> <p>NOx(ppmdv) ----- 3.0% -----less than 10% of RM.</p> <p>NOx(lb/mmBTU) ----- ---0.01-----less than absolute +/- 0.20.</p> <p>CO (lb/mmBTU) ----- ----0.024-----less than abs. diff +/- 0.0040</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/19/2020	Stack Test	Compliance	<p>Marathon performed stack testing on the Crude/Vac Heater on October 31-November 1, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : PM, FPM, H2SO4, NSFPM</p> <p>Test Results were:</p> <p>PM (lb/MMBTU) ----- -0.0008----- below limit of 0.0019</p> <p>H2SO4(lb/MMBTU)----- 0.0006----- no limit</p> <p>PM(lb/MMBTU)-corrected----- -----0.0003----- below limit of 0.0019</p> <p>NSFPM(lb/mmBTU)----- -----0.0009-----</p> <p>N/A</p> <p>Crude Heater averaged around 196 mmbtu/hr Vac Heater averaged around 100 mmtu/hr</p> <p>Crude Processing rate was around 145000 bbd The PM limit of 0.0019 was easily met even without subtracting H2SO4. Facility has passed the 3 out 4 tests without needing the subtraction of H2SO4 to pass. Technical Programs Unit has advised discontinuing as the Division feels that the facility has made operational and maintenance changes to pass easily without the H2SO4 subtraction.</p> <p>All results were below permit limits</p>

Activity Date	Activity Type	Compliance Status	Comments
03/19/2020	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the Alky DIB Reboiler on October 24, 2019, to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)-----0.1- ----- less than +/- 1.0% dv NOx(ppm @ 0% O2) ----- -----3.4% -----less than 20% of RM. NOx(lb/mmBTU) ----- ---3.5-----less than 20% of RM.</p> <p>Results were below permit limits.</p>
03/05/2020	Stack Test Observation		B&W Boiler Stack Test- VOC and PM
03/05/2020	Scheduled Inspection	Compliance	B&W Boiler
03/04/2020	Stack Test Observation	Compliance	FCCU Regenerator Test for PM and VOC
02/26/2020	Excess Emissions (CEM)	Compliance	57 analyzers were included in this report. Marathon reported that excess emissions were below 1% for the quarter for all CEMS during 4th Quarter 2019. CEMS were all below 5% downtime for the 4th Quarter.
02/24/2020	ROP SEMI 2 CERT	Non Compliance	ROP Certification deviations were spot checked. Violation Notices were issued on November 8, 2018 and December 20, 2018 for deviations that were reported earlier in the reporting period. A full review was not completed but deviations were reviewed and will see if they become patterns in future reporting periods.

Activity Date	Activity Type	Compliance Status	Comments
02/24/2020	MACT (Part 63)	Compliance	<p>Subpart R- Summary Report- Gaseous and Opacity Excess Emission and CEMS Performance, Subpart R</p> <p>Submittal of Semi-Annual MACT Report- Subpart Covering July 1, 2019 through December 31, 2019. Operating downtime was less than 5% and Excess Emissions were below 1%. RATA was conducted on June 6, 2019. No equipment leaks not repaired within 5 days after detection. Cylinder gas audits were conducted on September 26, 2019 and December 16, 2019.</p>
02/20/2020	Release Reports	Compliance	<p>January 5, 2020- The Coker Unit experienced an upset due to sudden increase in Coke Drum pressure during a water quench. vapors were Relieved to Coker Flare. 4144 pounds of SO2 were released during the 24 hour period beginning 5:30AM on January 4, 2020. 3292 lbs of SO2 were released from the Coker Flare. Total duration of the incident was 1 hour 55 minutes. An investigation is being conducted to determine the cause of the incident.</p>
02/20/2020	MACT (Part 63)	Compliance	Semi-Annual MACT Report. See Activity Report CA_A983152447
02/20/2020	Other	Compliance	Review of Semi-Annual MACT Report
01/30/2020	Excess Emissions (CEM)	Unknown	<p>Air Products Excess Emission Reports for 4th Quarter 2019.</p> <p>No excess emissions for NOx (lb/MMBTU and ppm) and CO. Downtime was 5.49 % for each monitor. TPU staff was forwarded the quarterly report for further evaluation.</p>
01/29/2020	Odor Evaluation	Compliance	Odor Surveillance

Activity Date	Activity Type	Compliance Status	Comments
01/24/2020	Excess Emissions (CEM)	Non Compliance	<p>57 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 3rd Quarter 2019 except the following:</p> <p>FCCU Regenerator(Opacity)----- -----1.76%</p> <p>CEMS downtime was less than 5% for the quarter for all CEMS</p> <p>AQD Staff Issued a Violation Notice on October 7, 2019 for excess emissions from the FCCU (opacity) in addition to violating the startup, shutdown, and hot standby limit of 20 feet per second (inlet velocity).</p>
01/16/2020	MACT (Part 63)	Compliance	<p>Notification for long-term temporary heater at Rouge Asphalt Terminal.</p> <p>Natural Gas/Refinery Fuel Gas with 10 MMBTU/hr heat input capacity. Heater is subject to 40 CFR 63 Subpart DDDDD. It was placed into service on December 17, 2019.</p>
01/16/2020	Rule 912	Compliance	<p>September 16-17,2019, the FCCU was in startup after an unplanned shutdown. During this period, the one hour carbon monoxide average exceeded 500 ppm for 21 hours. during this period, MPC operated the FCCU Regenerator in compliance with the alternative standards applicable to periods of startup, shutdown and hot standby contained in 40 CFR 63.1565 (a) (5)(ii).</p>
01/10/2020	Release Reports	Compliance	
01/10/2020	Release Reports	Compliance	<p>October 28, 2019- East Plant SRU experienced an upset due to a fire contained in the Eas Plant sulfur pit. Sulfur pit is vented to the East Plant Thermal Oxidizer. The fire caused the vapors and liquid sulfur to combust in the pit, resulting in higher SO2 emissions the Thermal Oxidizer. AQD received and reviewed report but will evaluate the incident in the next Semi-Annual ROP Certification Report.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/10/2020	NSPS (Part 60)	Compliance	30 day notice of inspection and return to service. Tank 128- an external floating roof tank undergoing a clean out. The tank will have a seal inspection completed before refill on or after December 27, 2019.
01/09/2020	ROP Semi 1 Cert	Non Compliance	AQD reviewed certain portions of the semiannual report for the period covering January 1 through June 30, 2019, due to time constraints. There were several deviations submitted that were issued Violation Notices during the reporting period. They are currently referred in a Consent Order that is being negotiated with the facility.
01/08/2020	Complaint Investigation	Unknown	Odor complaint investigation

01/07/2020	Stack Test	Compliance	<p>Air Products performed a RATA and stack test on the Hydrogen Heater on November 6-7, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were : PM, H2SO4, VOC, NOx, CO , H2O and O2</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.00040----- less than 0.0034 lb/mmBTU PM (Ton/yr)----- -----1.08----- less than 6.86 TPY PM10(lb/mmBTU)----- -----0.0015-----less than 0.010 lb/mmBTU H2SO4(lb/mmBTU)----- -----0.00020----- N/A ---- No limit VOC(lb/mmBTU)----- -----<0.00065----- less than 0.0055 lb/mmBTU NOx(lb/mmBTU)----- -----0.0063----- less than 0.013 lb/mmBTU NOx(ppmdv@0% O2)----- -----5.8----- less than 60 ppm CO (Ton/yr)----- -----<1.1----- less than 13 TPY.</p> <p>RATA Results were O2(%dv)----- 0.026 %-----less than +/- 1.0%dv H2O(%wv)----- 2.4%-----NA NOx(ppmdv) ----- 0.8% ----- less than 20% of RM NOx(lb/MMBTU)----- 5.8%-----less than 20% of RM NOx(ppmdv@0%O2)----- 1.0%-----less than 20% of RM CO (ppmdv)----- --0.5 ppmdv-----less than +/- 5 ppmdv CO(lb/hr)----- --0.4% -----less than 5% of Standard</p>
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01/07/2020	Stack Test	Compliance	Process Conditions- Hydrogen Production - Averaged 58.8 Mscf/day NH3 feed rate ----- 28.1 lbs/hr SCR Inlet temperature----- 622 F Results were below permit limits.
01/02/2020	MACT (Part 63)	Compliance	Subpart CC; UUU; GGGGG; ZZZZ; DDDDD. See Activity Report CA_A983151879
01/02/2020	Other	Compliance	Review Semi-annual MACT Report
12/23/2019	Excess Emissions (CEM)	Compliance	Air Products Excess Emission Reports for 3rd Quarter 2019. No excess emissions for NOx (lb/MMBTU and ppm) and CO. Downtime was less than 5 %
12/23/2019	NSPS (Part 60)	Compliance	Quarterly Report for 2Q 2019- Air Products Cylinder Gas Audits. CGAs were done December 12, 2018. No test exceed more than 5% Accuracy. NSPS allows for 15% or +/-5 ppm.
12/23/2019	ROP Semi 1 Cert	Compliance	Deviations were for CEMS maintenance. Downtime was less than 5%.
12/19/2019	Other		3rd Quarter 19 LDAR, Benzene Waste NESHAP, and QQQ Report
12/19/2019	Other Non ROP	Compliance	3rd Quarter LDAR, Benzene Waste NESHAP, and QQQ Report. See Activity Report CA_A983151761.
12/18/2019	Other	Compliance	2nd Quarter 2019 LDAR, Benzene Waste NESHAP, and QQQ Report
12/18/2019	Other Non ROP	Compliance	Review of 2nd Quarter LDAR, Benzene Waste NESHAP, and QQQ Report. See Activity Report CA_A983151736.
12/18/2019	NSPS (Part 60)	Compliance	2nd Quarter 2019 CEMS Report- Downtime less than 2% and no excess emissions.

Activity Date	Activity Type	Compliance Status	Comments
12/11/2019	Stack Test	Compliance	<p>Marathon performed stack testing on the Crude/Vacuum Heater on August 15, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : PM</p> <p>Test Results were:</p> <p>PM (lb/MMBTU) ----- -0.0022----- above limit of 0.0019</p> <p>H2SO4(lb/MMBTU)----- 0.0006----- no limit</p> <p>PM*(lb/MMBTU)----- <.0017----- below limit of 0.0019</p> <p>NSFPM(lb/MMBTU)----- --0.0010-----No limit</p> <p>*- PM is PM measured under USEPA Method 5 Minus H2SO4 as agreed temporarily by the Air Quality Division- This was a result of an enforcement case with Marathon Petroleum. This is the 3rd Quarterly Test of the Crude/Vac Heater and AQD will review all four test before deciding future action.</p>
12/05/2019	NSPS (Part 60)	Compliance	3rd Quarter Cylinder Gas Audit- Each test passed
12/05/2019	CEM RATA	Compliance	<p>Marathon performed a RATA on the CCR InterHeater on April 23, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were O2 and NOx</p> <p>RATA Results were</p> <p>O2(%dv)----- -----0.31%----- less than +/- 1.0%dv</p> <p>NOx (lb/mmBTU)----- -----7.2%-----less than 20% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/04/2019	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the Zurn Boiler on September 26, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, H2S04, VOC, O2, and NOx</p> <p>Test Results were:</p> <p>PM (lb/MMBTU) ----- -0.0013----- below limit of 0.0019</p> <p>H2S04(lb/MMBTU)----- 0.00006----- no limit</p> <p>VOC(lb/MMBTU)----- -<.0007----- below limit of 0.0055</p> <p>RATA Results:</p> <p>O2 (%dv)----- 0.04-----less than +/- 1.0%</p> <p>NOx(lb/MMBTU)----- 7.4-----less than 20% of RM</p> <p>Highest Heater Duty was around 127 MMBTU/hr Steam Production was about 139 mlb/hr</p> <p>All results were below permit limits</p>

Activity Date	Activity Type	Compliance Status	Comments
12/04/2019	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the North SRU Incinerator on September 27, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : CO, O2, and SO2</p> <p>Test Results were: CO (lb/MMBTU) ----- -0.02----- below limit of 0.04</p> <p>RATA Results: O2 (%dv)----- 0.23-----less than +/- 1.0%</p> <p>SO2(ppm @0%O2)----- --1.5-----less than 10% of Standard</p> <p>Highest Heater Input was 30.9MMBTU/h Coker Throughput was around 42000 BPD GOHT Throughput was about 44500 BPD</p> <p>All results were below permit limits</p>

Activity Date	Activity Type	Compliance Status	Comments
12/04/2019	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the East SRU Incinerator on September 6, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : CO, O2, and SO2</p> <p>Test Results were:</p> <p>CO (lb/MMBTU) ----- -0.02----- below limit of 0.04</p> <p>RATA Results:</p> <p>O2 (%dv)----- 0.01-----less than +/- 1.0%</p> <p>SO2(ppm @0%O2)----- --19.5-----less than 20% of Standard</p> <p>Highest Heater Input was 13.3 MMBTU/h DHT Throughput was around 47000 BPD</p> <p>All results were below permit limits</p>

Activity Date	Activity Type	Compliance Status	Comments
12/02/2019	Stack Test	Compliance	<p>Marathon performed a drift test on Cooling Towers A, C, D, E and F at the refinery on May 15, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : drift test</p> <p>Test Results were:</p> <p>Average drift rate for Cooling Tower A, was .0012% based on the average of the calcium and magnesium test results.</p> <p>Average drift rate for Cooling Tower C, was .0030% based on the average of the calcium and magnesium test results.</p> <p>Average drift rate for Cooling Tower D, was .0017% based on the average of the calcium and magnesium test results.</p> <p>Average drift rate for Cooling Tower E, was .0012% based on the average of the calcium and magnesium test results.</p> <p>Average drift rate for Cooling Tower F, was .0014% based on the average of the calcium and magnesium test results.</p> <p>The requirement in the Permit was to determine drift loss.</p>
12/02/2019	CEM RATA	Compliance	<p>Marathon performed a RATA on the DHT Heater on September 24, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were O2 and NOx</p> <p>RATA Results were</p> <p>O2(%dv)----- -----0.09 %----- less than +/- 1.0%dv</p> <p>NOx (lb/mmBTU)----- -----11.0%-----less than 20% of RM</p> <p>NOx (ppm @0%O2)----- -----11.0%-----less than 20% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/21/2019	Release Reports	Compliance	On September 12, 2019 , a vapor leak was seen coming from a flange on a two inch slurry oil line in the Fluidized Catalytic Crack Unit. This resulted in an emergency shutdown of the unit. The leak was isolated. The unit was directed to the Coker Flare for around 15 hours. The refinery reported a H2S and SO2 release as precaution. After further review, the refinery concluded that no reportable release of either H2S and SO2.
11/21/2019	CEM RATA	Compliance	Mark Dziadosz, TPU, sent a letter to Marathon Petroleum staff person Victor Brzeg, regarding the CEMS Rata performed on June 6, 2019. Mr. Dziadosz stated that the AQD reviewed the completed report and found that the facility satisfied the annual RATA requirement in 40 CFR 60, Appendix B.
11/21/2019	Other Non ROP	Compliance	TPU staff Tom Gasloli sent the Detroit Office a memo summarizing his review of the June 11, 2019 stack test of the Crude/Vacuum heater. Based on his review of the protocol and notes during the stack test, he concluded that the test results were acceptable to the AQD.
11/21/2019	NSPS (Part 60)	Compliance	Notice was provided for tank 104, an internal floating roof tank. The refinery plans on performing a preliminary inspection of the tank, while the tank is in-service. The tank may be taken out of service to perform a maintenance cleaning on or after October 7, 2019.

Activity Date	Activity Type	Compliance Status	Comments
11/21/2019	Rule 912	Non Compliance	<p>On January 30, 2019, the Hydrogen plant experienced an unplanned shutdown due to the cold weather. The hydrogen plant supplies 30-60% of the steam used in the refinery. Multiple shutdowns occurred. The following excess emissions occurred:</p> <p>East Plant SRU exceeded the SO2 limit of 250 ppm(12 hour average) starting at 8AM on January 30, 2019 and is ongoing.</p> <p>North Plant SRU Thermal Oxidizer exceeded the SO2 limit of 250 ppm (12 hour average) for 55 hours.</p> <p>East Plant Fuel Gas CEMS exceeded the H2S limit of 160 ppm(3 hour average) for 104 hours between January 30 and February 3.</p> <p>West Plant Fuel Gas CEMS exceeded the H2S limit of 160 ppm(3 hour average) for 13 hours on January 30</p>
11/20/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the GOHT Charge Heater on July 16, 2019 to comply with ROP MI-ROP=A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :O2 and NOx</p> <p>Test Results were:</p> <p>O2(%dv)-----0.21----- less than +/- 1.0% dv NOx(lb/mmBTU) ----- ---6.8% ----- less than 20% of RM. Charge rate was about 43600 bpd and heat input was around 29 MMBTU/hr.</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/20/2019	Stack Test	Compliance	<p>Marathon performed stack testing a RATA on the Coker Charge Heater on July 23-24, 2019, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : PM, PM10, H2S04, VOC, O2, CO, and NOx</p> <p>Test Results were:</p> <p>PM (lb/MMBTU) ----- -0.0013----- below limit of 0.0019</p> <p>PM10 (lb/MMBTU)----- -0.0043----- below limit of 0.0076</p> <p>H2S04(lb/MMBTU)----- 0.0005----- no limit</p> <p>VOC(lb/MMBTU)----- -<.0008----- below limit of 0.0055</p> <p>NSFPM(lb/MMBTU)----- --0.0005-----No limit</p> <p>RATA Results:</p> <p>O2 (%dv)----- 0.02-----less than +/- 1.0%</p> <p>NOx(ppm @0%O2)----- 6.2-----less than 10% of standard</p> <p>NOx(lb/MMBTU)----- 3.4-----less than 20% of RM</p> <p>CO(lb/MMBTU)----- 0.0-----less than 5 % of Standard</p> <p>Highest Heater Duty was around 230 MMBTU/hr Charge Rate was about 40000 bpd</p> <p>All results were below permit limits</p>
11/14/2019	NSPS (Part 60)	Compliance	<p>AQD Received a 30 day notice for Tank 33. Tank 33 is an external floating roof tank. Tank is undergoing a solids removal clean out and will have an inspection completed before tank refill on or after November 25, 2019. Notice is required by 40 CFR 60.113b(b) (6)(ii).</p>

Activity Date	Activity Type	Compliance Status	Comments
11/14/2019	Relocation Notification	Compliance	Notification of Temporary Boiler Removal. Portable Boiler was removed on October 9, 2019.
11/14/2019	Rule 912	Compliance	Rule 912- On October 28, 2019, The SRU experienced an upset due to a Potential fire in the East Plant sulfur pit. The EP SRU Thermal Oxidizer exceeded the SO2 limit of 250 ppm, based on a 12-hour average for 16 hours. East Plant Thermal Oxidizer was operated in compliance with the alternative limits applicable to periods of startup and shutdown contained in 40 CFR 63.1568(a)(4)(iii).
11/07/2019	Rule 912	Non Compliance	Rule 912 Report- On July 31, 2019- East Plant SRU was in hot standby mode and being swept with natural gas in preparation for shutting down the Tail Gas Treater Unit No. 2 for maintenance. While Gas was directed to the Thermal Oxidizer per procedure and while SO2 instantaneous output stayed below the 250 ppm, the O2 corrected SO2 instantaneous output showed SO2 levels between 254 and 282 for 8 hours. The East Plant SRU Thermal Oxidizer exceeded the SO2 limit of 250 ppm for 4 hours.

Activity Date	Activity Type	Compliance Status	Comments
11/07/2019	Rule 912	Non Compliance	<p>September 21, 2019- FCCU Regen. Heater tripped on high fuel gas pressure while steaming impulse lines on heater pass#1 that had plugged with catalyst. Emergency shutdown of the FCCU diverted hydrocarbon material containing high quantities of C4 to the flare. This resulted in visible emissions at the coker flare intermittently between 5:30PM and 6:30PM.</p> <p>ESPs were shut down for safety considerations from approximately 6PM on Sept. 21, 2019 until 3:00AM on September 22, 2019. Primary power and secondary current fell below the permitted level during that time. FCCU intermittently exceeded 20% opacity for approximately 288 minutes between approximately 5:40PM, September 21, 2019 until 2:20AM on September 22, 2019. CO from the FCCU Regenerator were greater than 500 ppm from 6PM on September 21, 2019 until 1AM, September 22, 2019.</p> <p>FCCU operated in compliance with alternative limits applicable to periods of startup, shutdown, and hot standby contained in 40 CFR 63. 1564(a)(5)(ii).</p>

Activity Date	Activity Type	Compliance Status	Comments
11/07/2019	Rule 912	Non Compliance	<p>Vapor leak from FCCU caused emergency shutdown on 9/12/19. This led to FCCU COMS reading excess opacity from 9/12/19 to 9/14/19. Refinery believes the cause of opacity readings were due to steaming that was occurring.</p> <p>North Plant SRU Thermal Oxidizer experienced 6 hours of SO2 emissions over the limit of 250 ppm based on 12 hour average for 6 hours.</p> <p>FCCU Regen. experienced a possible exceedance of PM and PM10 emissions for 13 hours from 9/14/19 at 10AM to 9/15/19 at 12AM. FCCU was below 20ft/sec for primary cyclone inlet velocity. Violation of 40 CFR 63.1564(a)(5)(ii).</p> <p>FCCU Regen. Had excess opacity for 32 hours. During startup from 9/14/19 to 09/15/19.</p> <p>Violation Notice was issued on October 7, 2019.</p>
11/04/2019	NESHAP (Part 61)	Compliance	<p>Total annual benzene in waste for the reporting period is 56.88 Mega-grams. Marathon's 6 Mg uncontrolled benzene quantity has been calculated to be 2.94 Mega-grams.</p>
10/29/2019	MACT (Part 63)	Compliance	<p>Summary Report- Gaseous and Opacity Excess Emission and CEMS Performance, Subpart R</p> <p>Submittal of Semi-Annual MACT Report- No CMS > 5%. RATA was conducted on June 6, 2019. No equipment leaks not repaired within 5 days after detection. Cylinder gas audits were conducted on March 11, 2019.</p>
10/14/2019	Other Non ROP	Compliance	<p>Marathon Delayed Coker Test-TPU Emission Test Report</p> <p>Quality assurance review of the air emission report was done by TPU. The sampling and analytical methods in the report satisfy the requirements of the method.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/14/2019	Release Reports	Compliance	On September 21, 2019, fuel gas pressure to the FCCU went high and it was believed that the heater had tripped off. FCCU was shutdown. Upon startup, H2S content of the refinery fuel gas spiked from 1:55AM to 3:09AM on September 22, 2019. Preliminary calculations indicated that SO2 emissions were in excess of permitted limits. After further review, Marathon concluded that there was no reportable release of SO2.
10/07/2019	ROP Semi 1 Cert	Compliance	Semiannual Report for Period January 1-June 30, 2019. Two deviations were noted. Deviations were due to CEMS downtime for maintenance.
10/02/2019	NSPS (Part 60)	Compliance	30-day notice of Tanks 72 Internal Floating Roof Seal Inspection.
10/02/2019	NSPS (Part 60)	Compliance	Semi Annual Report- LDAR Report- 650 valves - 10 leaks found- Repaired in 15 days 1 pump- No leaks found 18 Relief Valve- No leaks 1232 Connector---- 11 leaks- Repaired in 15 days.

Activity Date	Activity Type	Compliance Status	Comments
10/01/2019	Stack Test	Compliance	<p>Marathon performed a stack test on the Crude/Vacuum Heater on June 11 through June 12, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, VOC, and H2SO4</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.00075----- less than 0.0019 lb/mmBTU VOC (lb/mmBTU)----- -----<0.00078----- --less than 0.0055 lb/mmBTU FPM (lb/mmBTU)----- -----0.0016----- N/A No limit H2SO4(lb/mmBTU)----- -----0.0011----- N/A ---- No limit NSFPM (lb/mmBTU)----- -----0.0013----- -N/A No limit</p> <p>RATA Results were: O2(%dv)----- -----0.06----- -----less than +/- 1.0% dv NOx(ppm@0%O2)----- -----4.4----- -----less than 20% of RM NOx(lb/MMBTU)----- -----4.5----- -----less than 20% of RM</p> <p>Results were below permit limits</p>

Activity Date	Activity Type	Compliance Status	Comments
10/01/2019	Stack Test	Compliance	<p>Marathon performed a Stack Test on the Delayed Coker Unit on June 4, 2019 to June 6, 2019 to comply with ROP: MI-ROP-A9831-2012c, which was issued on September 12, 2016. AECOM was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : VOC, H2S, PM</p> <p>Test Results were: H2S- 0.6 1lb/cycle – VOC- 0 lb/cycle- Data indicates negative numbers but represented as zero. PM- .01 lb/cycle</p> <p>Based on the stack test results and limit of 487 cycles in the PTI, emissions should stay below permit limits.</p>
09/30/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a CEMS RATA on the B&W Boiler on April 16-17, 2019 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were :O2, NOx, and CO</p> <p>RATA Results were O2(%dv)----- ---0.88-----less than +/- 1.0% NOx(ppmdv)----- --1.1% -----less than 10% of standard NOx(lb/MMBtu)----- ---0.0068 -----less than +/-0.020 CO (lb/MMBTU)----- ---0.0025-----less than +/- 0.0040</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
09/30/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a CEMS RATA on Vacuum 2 Heater on June 13, 2019 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were :O2 and NOx</p> <p>RATA Results were O2(%dv)----- -----0.7-----less than +/- 1.0% NOx(ppm @ 0%O2)----- -----3.5%-----less than 20% of RM NOx(lb/MMBtu)----- ----3.5%-----less than 20% of RM</p> <p>Results were below permit limits.</p>
09/27/2019	Stack Test Observation	Compliance	<p>North Plant SRU</p> <p>O2 and SO2 RATA</p> <p>CO Compliance</p>
09/26/2019	NSPS (Part 60)	Compliance	<p>Notice pursuant to 40 CFR 60.113b(b)(5), stating an external floating roof tank secondary seal inspection of the API separator. The inspection is scheduled to take place on or after October 1, 2019.</p>
09/19/2019	ROP Semi 1 Cert	Compliance	<p>Certification indicated that there no deviations that occurred during the six month period.</p>
09/19/2019	Excess Emissions (CEM)	Compliance	<p>Air Products Excess Emission Reports for 2nd Quarter 2019.</p> <p>No excess emissions for NOx (lb/MMBTU and ppm) and CO. Downtime was less than 5 %</p>
09/06/2019	Stack Test Observation		<p>East Plant Thermal Oxidizer</p>
08/27/2019	MACT (Part 63)	Compliance	<p>Notification of Compliance Status for delayed coking units and pressure relief devices provisions of MACT Subpart CC.</p>
08/15/2019	Stack Test Observation	Compliance	<p>Crude/Vac Heater Stack Test</p>

Activity Date	Activity Type	Compliance Status	Comments
08/09/2019	Release Reports	Compliance	<p>Continuous Release Report for Hydrogen Cyanide.</p> <p>Stack test was done on May 2012 and March 2013 indicating that emissions of Hydrogen Cyanide were above 10lbs/24hours (CERCLA threshold). Requirement to test is in Federal MACT Standard but no emission limit set for HCN. HCN is known to be emitted so no permit to install was needed per AQD Permitting staff for PTI Application 18-12.</p>
07/25/2019	CEM RATA	Compliance	<p>Marathon submitted results of a RATA of the CEMS at the Light Products Terminal.</p> <p>Results showed the monitor has passed the required 10% relative accuracy</p>
07/18/2019	Excess Emissions (CEM)	Non Compliance	<p>57 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 1st Quarter 2019 except the following:</p> <p>Vacuum Heater (NOx)- 4.62% East Plant Fuel Gas NSPS Heaters ---- 5.65% East Plant SRU Thermal Oxidizer (SO2)-----12.31% GOHT Heater 2 (NOx)-----25.85% FCCU Regenerator(Opacity)-----5.00% North Plant SRU Thermal Oxidizer (SO2)-----2.91% CEMS downtime was over 5% for the quarter for the following CEMS: East Plant Fuel Gas NSPS - 11.1 % AQD Staff Issued a Violation Notice for downtime and excess emissions on July 23, 2019.</p>
07/08/2019	Scheduled Inspection	Compliance	

Activity Date	Activity Type	Compliance Status	Comments
06/21/2019	Stack Test	Compliance	<p>Marathon Petroleum conducted a stack test on the GOHT Charge Heater No.2 (EU08-GOHTCHARHTR2-S1) on April 9 through April 10, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were : PM, PM10, PM2.5, VOC, NSFPM and H2SO4</p> <p>Test Results were:</p> <p>PM (lb/mmBTU)----- -----0.0008-----less than 0.0019 lb/mmBTU</p> <p>PM10(lb/mmBTU)----- -----0.0022-----less than 0.0076 lb/mmBTU</p> <p>PM2.5(lb/mmBTU)----- -----0.0022----- less than 0.0076 lb/mmBTU</p> <p>VOC (lb/mmBTU)----- -----<0.0007----- less than 0.0055 lb/mmBTU</p> <p>H2SO4(lb/mmBTU)----- -----0.0006-----</p> <p>- No limit</p> <p>NSFPM(lb/mmBTU)----- -----0.0003-----</p> <p>N/A</p>

Activity Date	Activity Type	Compliance Status	Comments
06/21/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the H2S CEMS at the East Plant and West Plant on March 26, 2019 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were :H2S</p> <p>RATA Results were East Plant H2S (ppmwv)----- ---2.5% -----less than 10% of standard West Plant H2S (ppmwv)----- ---2.6% -----less than 10% of standard</p> <p>Results were below permit limits.</p>

06/19/2019	Stack Test	Compliance	<p>Air Products performed a RATA and stack test on the Hydrogen Heater on March 6 through March 7, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were : PM, H2SO4, VOC, NOx, CO , H2O and O2</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.00063----- less than 0.0034 lb/mmBTU PM (Ton/yr)----- -----1.72----- less than 6.86 TPY PM10(lb/mmBTU)----- -----0.0025-----less than 0.010 lb/mmBTU H2SO4(lb/mmBTU)----- -----0.000069----- N/A ---- No limit VOC(lb/mmBTU)----- -----<0.00065----- less than 0.0055 lb/mmBTU NOx(lb/mmBTU)----- -----0.0084----- less than 0.013 lb/mmBTU NOx(ppmdv@0% O2)----- -----7.8----- less than 60 ppm CO (Ton/yr)----- -----<1.1----- less than 13 TPY.</p> <p>RATA Results were O2(%dv)----- 0.070 %-----less than +/- 1.0%dv H2O(%wv)----- 19.2%-----NA NOx(ppmdv) ----- 11.6% ----- less than 20% of RM NOx(lb/MMBTU)----- 13.4%-----less than 20% of RM NOx(ppmdv@0%O2)----- 12.3%-----less than 20% of RM CO (ppmdv)----- --0.5 ppmdv-----less than +/- 5 ppmdv CO(lb/hr)----- --0.45 % -----less</p>
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06/19/2019	Stack Test	Compliance	than 5% of Standard Results were below permit limits.
06/19/2019	CEM RATA	Compliance	<p>Marathon performed a RATA on the CCR Charge Heater on March 28, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were CO and O2</p> <p>RATA Results were O2(%dv)----- -----0.50 %----- less than +/- 1.0%dv CO (lb/mmBTU)----- -----0.00067-----less than .0048 difference</p> <p>Results were below permit limits.</p>
06/19/2019	CEM RATA	Compliance	<p>Marathon performed a RATA on the CCR Charge Heater on April 24, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance. Marathon typically performs CCR Charge Heater RATAs in the 2nd Quarter, but performed a RATA in March 2019 to certify a new CO CEMS.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were NOx, CO, and O2</p> <p>RATA Results were NOx (lb/mmBTU)----- -----8.8-----less than 20% of RM O2(%dv)----- -----0.47%----- less than +/- 1.0%dv CO (lb/mmBTU)----- -----0.0----- less than 5% of Standard</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
06/19/2019	Stack Test	Compliance	<p>Marathon performed a stack test on the Crude/Vacuum Heater on January 9 through January 10, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM and H2SO4</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.0001----- less than 0.0019 lb/mmBTU FPM (lb/mmBTU)----- -----0.0004----- N/A No limit H2SO4(lb/mmBTU)----- -----0.0003----- N/A ---- No limit NSFPM (lb/mmBTU)----- -----0.0003----- -less than 0.0019 lb/mmBTU</p> <p>Results were below permit limits</p>
06/19/2019	CEM RATA	Compliance	<p>Marathon performed a RATA on GOHT Heater No. 2 on April 10, 2019 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : NOx and O2</p> <p>RATA Results were O2(%dv)----- --- 0.25 %----- ---less than +/- 1.0%dv NOx(ppm @ 0% O2) ----- -----2.2%----- -- less than 20% of RM NOx(lb/MMBTU)----- -----2.2%----- less than 20% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
06/18/2019	NSPS (Part 60)	Compliance	AQD reviewed RATA report for CCR Charge Heater CEMS RATA for CO and O2. AQD determined results satisfied RATA requirement.
06/18/2019	Other Non ROP	Compliance	Notification of Temporary Boiler Installation. Date of placement of the Temporary Portable Boiler will be June 3, 2019.
06/17/2019	Other Non ROP	Compliance	AQD reported findings from review of CEMS RATA for Hydrogen Plant Heater.
06/13/2019	NSPS (Part 60)	Compliance	Air Products submitted quarterly CEMS reports- During the 3rd quarter, the Refinery underwent a Turnaround which started on September 18, 2018. No excess emissions were reported and downtime, which was due to malfunctions and calibration was less than 1.5% for the quarter.
06/13/2019	NSPS (Part 60)	Compliance	Air Products submitted results of the quarterly quality assurance procedures for the CEMS operating at their facility. CGA were performed on the following analyzers: NOx low range NOx high range O2 dry CO low range CO high range Results were within limits.
06/13/2019	NSPS (Part 60)	Compliance	Air Products submitted their quarterly CEMS report in accordance with the NSPS. No excess emissions were reported. Downtime was reported at less than 1.5%.
06/13/2019	MACT (Part 63)	Compliance	Marathon provided update to their Startup, Shutdown, and Malfunction Plan. It included updates that included the Gas Oil Hydrotreater Charge Heater No.2.
06/13/2019	Other Non ROP	Compliance	Marathon submitted a revised Fugitive Dust Control Program. The changes included site contacts, changing recordkeeping to once per day, and file locations and phone numbers.
06/11/2019	Stack Test Observation	Compliance	Crude/Vacuum Heater

Activity Date	Activity Type	Compliance Status	Comments
06/06/2019	Malfunction Abatement Plan	Compliance	Malfunction Abatement Plan updated for SCR installed at the Hydrogen Plant. The plan was updated to reflect the current catalyst replacement schedule.
06/06/2019	CEMS Test Observation	Compliance	Terminal RATA
06/06/2019	Scheduled Inspection	Compliance	Terminal - Loading Racks
06/05/2019	Stack Test Observation	Compliance	Coker Stack Test
05/21/2019	ROP Annual Cert	Compliance	Deviations due to downtime, calibration, repairs of CEMS
05/21/2019	ROP SEMI 2 CERT	Compliance	Deviations due to downtime, repair, and calibration of CEMS
05/21/2019	ROP Annual Cert	Compliance	No deviations were noted.
05/21/2019	ROP SEMI 2 CERT	Compliance	No deviations were noted.
05/21/2019	NSPS (Part 60)	Compliance	Notification provided for inspections of external floating roof tank secondary seals for Tanks 110, 114, and 127. Inspection to take place around May 1, 2018.
05/21/2019	NSPS (Part 60)	Compliance	Notification provided for inspections of external floating roof tank secondary seals for Tanks 110, 114, and 127. Inspection to take place around May 1, 2018.
05/21/2019	Release Reports	Compliance	RETRACTION- February 7, 2018 - a pressure safety valve in the GOHT was found to be relieving to flare. Marathon made notification because amount of SO2 emitted was unknown at the time. After further review and calculation, Marathon concluded that a RQ release of SO2 did not occur.
05/16/2019	NSPS (Part 60)	Compliance	Semi Annual NSPS report for Subparts QQQ and GGGa/VVa. It appears no compliance issues occurred. Inspections were done for QQQ and identified issues were corrected.
05/15/2019	Other Non ROP	Compliance	1st Quarter 2019 LDAR, Wastewater VOC, Benzene Waste NESHAP Report. See Activity Report CA_A983148854
05/15/2019	Other	Compliance	Review of 1st Quarter 2019 LDAR, BWON, and QQQ Report.

Activity Date	Activity Type	Compliance Status	Comments
05/14/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test on the B&W Boiler on March 6-8, 2019 to comply with ROP MI-ROP=A9831-2012c</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were :PM, H2SO4, and VOC.</p> <p>Test Results were:</p> <p>PM (lb/mmBTU)----- --0.0012 -----less than 0.0019</p> <p>H2SO4(lb/MMBTU)----- -0.0003-----No Limit</p> <p>VOC (lb/mmBTU)----- ----<0.0008 -----less than 0.0055</p> <p>NSFPM (lb/mmBTU)----- --0.0006-----No Limit</p> <p>RATA Results were:</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
05/14/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test on the FCCU Regenerator on March 13, 2019 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were : PM, PM10, NH3, H2SO4, and VOC</p> <p>Results were PM (lb/1000lb coke)----- -----0.2 -----less than 0.8 PM10(lb/1000 lb coke)----- -----0.3-----less than 1.1 NH3conc----- -20 NH3 slip----- -3.9 lb/hr H2SO4(lb/1000 lb coke)----- -----0.002-----no limit VOC(lb/1000 lb coke)----- -----0.015-----no limit VOC(TPY)----- -----1.3-----less than 21</p> <p>Results were below permit limits.</p>
05/03/2019	NSPS (Part 60)	Compliance	1st Quarter 2019 CEMS Report-Downtime less than 2% and no excess emissions.
05/03/2019	Release Reports	Compliance	RETRACTION- January 18, 2019 - North Plant SRU A an dB trains shut down due to an upset in the North Plant Amine Regeneration Unit. Led to increase in H2S concentration in the West Plant fuel gas system. SO2 produced at the time, so MPC made notification. After further review and calculation, MPC concluded that a RQ release of SO2 did not occur.
05/03/2019	Release Reports	Compliance	September 11, 2018- Equipment containing H2S started being depressured to the Coker Flare due to a planned refinery shutdown. Total quantity of 3094 pounds of SO2 released during the 24 hour period beginning at 11:00AM September 11, 2018.

Activity Date	Activity Type	Compliance Status	Comments
05/03/2019	NSPS (Part 60)	Compliance	Notice for inspections of external floating roof tank secondary seals for Tanks: 109, 112, 113, 115, 129, 130 76T601, 29T32, 29T33, 29T40 and 29T41. Primary seal inspections will be conducted on Tanks 29T32 and 29T33. Seal inspection will take place around May 1, 2019.
05/03/2019	Release Reports	Compliance	RETRACTION- Feb. 24, 2019- East Plant SRU had an upset due to a temporary loss of power. Since unknown quantity of SO2 produced was unknown. After further review and calculation, MPC concluded that a RQ release of SO2 did not occur.
05/03/2019	Rule 912	Non Compliance	East Plant experienced an electrical outage on February 24, 2019-. Amine pumps lost power and could not supply rich amine to the Stripper Unit. Then it could not supply lean amine to the Absorber. Without amine, Refinery was unable to remove H2S from the fuel gas. East Plant exceeded the H2S limit of 162 ppm based on 3 hour average for 18 hours.
05/03/2019	Release Reports	Compliance	RETRACTION- December 14, 2018, East Plant SRU experienced a loss of flow to C train due to a plugged line. C train was put on hot standby and flow was redirected to A & B trains, causing SO2 emissions at the time. Refinery made notifications but after further review and calculation, Refinery concluded a RQ release of SO2 did not occur.
05/01/2019	Release Reports	Unknown	RETRACTION- January 30, 2018 - hydrogen plant owned and operated by Air Products suddenly shut down due to extreme cold and freezing. Loss of Hydrogen caused upsets in refinery units, which led to depressuring to flare. February 2, 2019- leak was identified on the FCCU. Total quantity of 35, 693 pounds of SO2 released during 96 hour period. No H2S reportable quantity was met.
05/01/2019	NSPS (Part 60)	Compliance	Notice provided for inspection of external floating roof tank secondary seals of Tanks 108 and 128.

Activity Date	Activity Type	Compliance Status	Comments
04/29/2019	Malfunction Abatement Plan	Compliance	Air Products submitted a revised Malfunction Abatement Plan.
04/26/2019	Rule 912	Compliance	East Plant Sulfur Recovery Unit experienced high sulfur dioxide levels due to a loss of a liquid seal in a dipleg. A dipleg is piping that conducts liquid sulfur from the SRU to the sulfur pit. The SRU TO exceeded the SO2 limit of 250 ppm based on a 12 hour average for 16 hours. The SRU was operated in compliance with the alternative limit applicable during startup and shutdown contained in 40 CFR 63 Subpart UUU specifically "You can elect to send any startup or shutdown purge gases to a thermal oxidizer or incinerator operated at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen (O2) concentration of 2 volume percent". Marathon submitted data which showed they were above 1200 degrees and 2% Oxygen.
04/25/2019	Excess Emissions (CEM)	Non Compliance	57 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 3rd Quarter. CEMS downtime was over 5% for the quarter for the following CEMS: FCCU Opacity Monitor- 5.89% FCCU Regenerator CEMS- 7.24% Crude Glare Gas H2S analyzer - 8.01% Coker Flare H2S analyzer- 12.68% Unifiner Flare H2S- 13.31% TPU Staff Issued a Violation Notice for downtime on November 8, 2018.
04/25/2019	MACT (Part 63)	Compliance	Notice of external floating roof tank secondary seal inspection of the API separator. Inspection will take place on or before September 24, 2018.

Activity Date	Activity Type	Compliance Status	Comments
04/25/2019	Other Non ROP	Compliance	Turnaround Notification- Will last from September 4, 2018 through November 1, 2018. Several flaring events occurred during this timeframe. AQD received complaints from residents regarding excess flaring.
04/25/2019	Release Reports	Compliance	RETRACTION- November 30, 2018- North Plan Amine Stripper overfilled and sent a slug of liquid to North Plant Amine Acid Gas knock out pot. High level caused NP SRU Train A and B to shut down. Marathon made notification due to unknown SO2 amounts. After further review and calculation, Marathon concluded that a RQ release of SO2 did not occur.
04/25/2019	NSPS (Part 60)	Compliance	AQD reviewed Marathon's 4th Quarter 2018 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on February 1, 2019 and is required pursuant to 40 CFR 60.7(d). 57 analyzers were included in this report. Marathon reported that excess emissions were below 1% for all CEMS during the 4th Quarter except the East Plant SRU and West Plant Fuel Gas with 1.49% and 1.52%, respectively. AQD will see if this trend continues to determine next steps. During this past quarter, the Refinery underwent a Turnaround which led to shutting down and starting up several process units.
04/24/2019	MACT (Part 63)	Compliance	Subpart CC; UUU; GGGGG; ZZZZ; DDDDD See Activity Report. CA_A983148633
04/24/2019	Other	Compliance	review of Semi-Annual MACT Report
04/19/2019	NSPS (Part 60)	Compliance	30 day notice of Tank 127 degassing, inspection and tank refill. Tank 127 is an external floating roof tank. Seal inspection will be completed before refill on or after April 8, 2019.

Activity Date	Activity Type	Compliance Status	Comments
04/19/2019	Rule 912	Compliance	February 6, 2019- Refinery was under shutdown due to Coker Flare damage and shutdown. Damage to the desuperheater was discovered on NP SRU B Train on February 4, 2019. Shutdown procedures were taken to make the fix. There was no acid gas in up stream units due to the shutdown. During this time, the NP SRU operated in compliance with the alternative limits applicable to periods of startup and shutdown.
04/19/2019	Release Reports	Compliance	January 21, 2019- North Plant SRU A and B trains shut down to an upset in the North Plant Amine Regeneration Unit. An upset in the GOHT also occurred. This led to increased SO2 emissions at the east plant Thermal Oxidizer. Total quantity of 3523 pounds represents the amount of SO2 released during the 24 hour period beginning at 4:00AM on January 21.
04/19/2019	Rule 912	Non Compliance	January 31, 2019- FCCU was shutdown due to malfunctioning CO process analyzer(different than CEMS). Malfunction occurred due to freezing weather. COM did not show exceedance of Opacity limit. However, because ESPs were not operating, PM and PM10 limits possibly exceeded limit for 28 hours.
04/18/2019	Release Reports	Compliance	RETRACTION- June 29, 2018, a pump case was misaligned and vented to the Cracking Plant Flare. Based on the unknown SO2 emissions, Marathon provided notifications to the appropriate agencies. After further review, Marathon concluded a RQ release did not occur.
04/11/2019	NSPS (Part 60)	Compliance	30 day notice of Tank 40 and 118 Internal Floating Roof Seal Inspection. Seals and Fittings will be inspected Week of April 1, 2019.
04/10/2019	Stack Test Observation	Compliance	GOHT2 Heater
04/05/2019	ROP SEMI 2 CERT	Compliance	No deviations reported.
04/05/2019	ROP Annual Cert	Compliance	No deviations reported.

Activity Date	Activity Type	Compliance Status	Comments
04/04/2019	Other Non ROP	Compliance	2018 Annual DHOP Annual Emissions and Net Actual Emissions Increase Summary for 2018. Results continue to show that significant net increase did not occur as a result of DHOUP.
03/28/2019	NSPS (Part 60)	Compliance	Quarterly Report for 4Q 2018- Air Products Cylinder Gas Audits. CGAs were done December 12, 2018. No test exceed more than 5% Accuracy. NSPS allows for 15% or +/-5 ppm.
03/28/2019	NSPS (Part 60)	Compliance	4Q 2018 CEMS Excess Emission Reports-- No excess emissions were reported.
03/28/2019	MACT (Part 63)	Compliance	2018 Annual Compliance Report- MACT Subpart 5D- Heater and Boiler MACT
03/28/2019	Other Non ROP	Compliance	Memo from M. Dziadosz, TPU, re: Coker Heater PM Test on Sept. 16, 2016. TPU reviewed the testing methods and analytical methods and found them acceptable. The results were approved to be used for compliance.
03/28/2019	Rule 912	Compliance	RETRACTION- February 25, 2019 - Startup of FCCU there was a delay in putting the ESP due to frozen carbon monoxide and oxygen analyzers. The FCCU was operating within the alternative limits specified 40 CFR Part 63 Subpart UUU. Marathon submitted the data along with the report.
03/27/2019	NSPS (Part 60)	Compliance	Submittal of Semi-Annual QQQ and GGGa/VVa Report. Drains were monitored for low levels and 3 components were assigned Delay of Repair in July 2018. Turnaround occurred in Fall 2018 so evaluation will be done to see if components come off Delay of Repair.
03/14/2019	ROP Semi 1 Cert	Compliance	No deviations reported.

Activity Date	Activity Type	Compliance Status	Comments
03/14/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test on the Crude/Vacuum Heater Stack on February 1, 2018 to comply with MI-ROP-A9831-2012c. The purpose of the test was for diagnostic purposes using the AQD approved Method dated 12/18/2017.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were :PM and H2SO4 using approved AQD method. Test Results were:</p> <p>PM (lb/mmBTU)----- --0.0034 -----less than 0.0019 H2SO4(lb/MMBTU)----- -0.0017-----No Limit PM – H2SO4(lb/mmBTU)----- -----0.0017 ----- less than 0.0019</p> <p>Results were below permit limits when H2SO4 was subtracted.</p>
03/14/2019	MACT (Part 63)	Compliance	<p>Notification of Performance Evaluation for Flare Vent Gas Composition Monitors. Parametric monitoring system performance evaluation pursuant to the requirement in 40 CFR 63.8(e)(2) for the gas chromatographs used as flare vent gas composition monitors in accordance with 40 CFR 63.670(j)(1).</p>
03/14/2019	Rule 912	Non Compliance	<p>January 23, 2019- A small leak was discovered on the Light Cycle Oil flush line on the GCCU. Refinery reduced charge rate on the FCCU in order to isolate the line and stop the leak. Reducing the FCCU charge rate reduced temperature in the FCCU Regenerator which led to CO emissions exceeding the limit for 6 hours. There was another period of intermittent CO emissions over the limit for 4 hours on January 24, 2019. CO promotor was added during this period.</p>
03/14/2019	NSPS (Part 60)	Compliance	<p>Tanks 110, 114, and 127 will be inspected on or around April 1, 2019. These tanks are external floating roof tanks.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/14/2019	Other Non ROP	Compliance	Turnaround Inspection and Maintenance Plan for Crude/Vacuum Heater.
03/07/2019	MACT (Part 63)		Subpart CC; UUU; GGGGG; ZZZZ; DDDDD
03/07/2019	ROP SEMI 2 CERT	Compliance	Review of Semi-Annual ROP Certification. Deviations due to downtime.
03/07/2019	ROP Annual Cert	Compliance	Review of Annual ROP Certification. Deviations due to downtime.
03/07/2019	Other	Compliance	Review of Semi-Annual Mact Report
02/28/2019	MACT (Part 63)	Compliance	Submittal of Semi-Annual MACT Report- No CMS > 5%. RATA was conducted on June 21, 2018. No equipment leaks not repaired within 5 days after detection. Cylinder gas audits were conducted on September 18, 2018, December 11, 2018, and March 7, 2018.
02/28/2019	Other Non ROP	Compliance	4th Quarter 2018 LDAR, Wastewater VOC, Benzene Waste NESHAP Report. See Activity Report CA_A983147998.
02/28/2019	Other	Compliance	Review of 4th Quarter 2018 LDAR, BWON, and QQQ Report.

Activity Date	Activity Type	Compliance Status	Comments
02/21/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test and RATA on the CCR Interheater on June 27, 2018 to comply with ROP MI-ROP=A9831-2012c</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were :O2, NOx, CO, and VOC</p> <p>Test Results were:</p> <p>VOC (lb/mmBTU)----- -----<0.00072 -----less than 0.0055</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.13----- less than +/- 1.0% dv</p> <p>NOx (lb/mmBTU)----- -----7.8-----less than 20% of RM</p> <p>CO (lb/mmBTU)----- -----0.0-----less than 10% of RM</p> <p>Results were below permit limits.</p>
02/21/2019	Release Reports	Compliance	<p>RETRACTION- Upset in Cracking Plant Amine unit resulted in high H2S in the West Plant fuel gas system. Further calculations determined that a reportable quantity release of SO2 did not occur.</p>
02/21/2019	Release Reports	Compliance	<p>NOvember 8, 2018- North Plant Amine Unit experienced an upset due to excess butane entering the sour fuel system and concentrating in the NP acid gas. The butane caused the NP SRU Thermal Oxidizer to shut down on high temperature at 12:00 PM on November 8, 2018. This caused shutdown of East Plant SRU. Acid gas system was idled and amine treating was no longer effective causing high H2S in the refinery fuel gas systems. Total emissions- 4292 lbs SO2 during 24 hour period.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/21/2019	Rule 912	Non Compliance	<p>NOvember 8, 2018- North Plant Amine Unit experienced an upset due to excess butane entering the sour fuel system and concentrating in the NP acid gas. The butane caused the NP SRU Thermal Oxidizer to shut down on high temperature at 12:00 PM on November 8, 2018. This caused shutdown of East Plant SRU. Acid gas system was idled and amine treating was no longer effective causing high H2S in the refinery fuel gas systems. East Plant Fuel Gas Unit exceeded H2S limit of 160 ppm, based on a 3-hour average for 6 hours on November 8, 2018, west plant fuel gas unit exceeded H2S limit of 160 ppm for 19 hours, East Plant SRU Thermal Oxidizer exceeded SO2 limit of 250 ppm for 17 hours on November 8, North Plant SRU Thermal Oxidizer exceeded the SO2 limit of 250 ppm for 12 hours.</p>
02/21/2019	Release Reports	Compliance	<p>RETRACTION- October 26, 2018, NHT Stripper off gas material containing high H2S started relieving to the Coker flare. After further review, calculations showed a reportable quantity release of SO2 did not occur.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/21/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the DHT Heater 2 on December 12, 2018 to comply with ROP MI-ROP=A9831-2012c</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were :O2, NOx, and CO.</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.35----- less than +/- 1.0% dv</p> <p>NOx (ppm @0%O2)----- -----8.0-----less than 20% or RM</p> <p>NOx (lb/mmBTU)----- -----5.6-----less than 20% of RM</p> <p>CO (lb/mmBTU)----- -----0.47-----less than 10% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/21/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the GOHT Heater 2 on December 14, 2018 to comply with ROP MI-ROP=A9831-2012c</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were :O2, NOx, and CO.</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.16----- less than +/- 1.0% dv</p> <p>NOx (ppm @0%O2)----- -----7.6-----less than 20% or RM</p> <p>NOx (lb/mmBTU)----- -----17.1-----less than 20% of RM</p> <p>CO (lb/mmBTU)----- -----0.4-----less than 10% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/20/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test and a RATA on the Zurn Boiler on December 10-11, 2018 to comply with ROP MI-ROP=A9831-2012c</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were :PM, H2SO4, VOC, and NOx</p> <p>Test Results were:</p> <p>PM (lb/mmBTU)----- --0.00055 -----less than 0.0019</p> <p>H2SO4(lb/MMBTU)----- -7.2E-05-----No Limit</p> <p>VOC (lb/mmBTU)----- ----<0.00066 -----less than 0.0055</p> <p>RATA Results were:</p> <p>O2(%dv)----- ----0.28----- less than +/- 1.0% dv</p> <p>NOx (lb/mmBTU)----- ----4.7-----less than 20% of RM</p> <p>Results were below permit limits.</p>
02/15/2019	Rule 912	Non Compliance	<p>January 21, 2019- a broken linkage caused the vessel level control valve for the hot separator in the Gasoil Hydrotreater (GOHT) to fail. This caused several things to occur. Loss of level control in the vessel and gasoil verflowed into the cold separator and Amine system. This caused elevated concentrations of H2S in the Amine system, which in turn caused elevated concentrations fo SO2 in the Eas Plant SRU Thermal Oxidizer. Incident lasted 14 hours. SO2 from East Plant SRU Thermal Oxidizer exceeded SO2 limit of 250 ppm based on 12 hour average for 14 hours.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/14/2019	Stack Test	Compliance	<p>Marathon Petroleum conducted a stack test on the Coker Heater (EU70-COKERHTR-S1) on December 4 through December 5, 2018 to comply with ROP MI-ROP=A9831-2012c. This was a retest of a failed stack test conducted on August 15, 2018. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum. Pollutants tested were : PM, PM10, and H2SO4</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.0002----- less than 0.0019 lb/mmBTU PM10(lb/mmBTU)----- -----0.0023-----less than 0.0076 lb/mmBTU H2SO4(lb/mmBTU)----- -----0.0006----- - No limit FPM(lb/mmBTU)----- -----0.0006----- N/A NSFPM(lb/mmBTU)----- -----0.0004----- N/A</p>
02/12/2019	Stack Test	Compliance	<p>Marathon performed stack testing on the Delayed Coker on June 24 through June 26, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>AECOM was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : H2S, VOC, and PM</p> <p>Test Results were: H2S- 1.68 1lb/cycle – VOC- 0 lb/cycle- PM- .02 lb/cycle</p> <p>Based on the stack test results and limit of 487 cycles in the PTI, emissions should stay below permit limits.</p>

02/12/2019	Stack Test	Compliance	<p>Air Products performed a RATA and stack test on the Hydrogen Heater on March 6 through March 8, 2018 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were : PM, H2SO4, VOC, NOx, CO , H2O and O2</p> <p>Test Results were: PM (lb/mmBTU)----- -----0.00054----- less than 0.0034 lb/mmBTU PM (Ton/yr)----- -----1.38----- less than 6.86 TPY PM10(lb/mmBTU)----- -----0.0021-----less than 0.010 lb/mmBTU H2SO4(lb/mmBTU)----- -----0.00014----- N/A ---- No limit VOC(lb/mmBTU)----- -----<0.00067----- less than 0.0055 lb/mmBTU NOx(lb/mmBTU)----- -----0.0067----- less than 0.013 lb/mmBTU NOx(ppmdv@0% O2)----- -----6.2----- -less than 60 ppm CO (Ton/yr)----- -----<0.89----- -less than 13 TPY.</p> <p>RATA Results were O2(%dv)----- 0.030 %-----less than +/- 1.0%dv H2O(%wv)----- 1.1%-----NA NOx(ppmdv) ----- 2.0% ----- less than 20% of RM NOx(lb/MMBTU)----- 5.3%-----less than 20% of RM NOx(ppmdv@0%O2)----- 1.4%-----less than 20% of RM CO (ppmdv)----- --0.5 ppmdv-----less than +/- 5 ppmdv CO(lb/hr)----- --0.4 % -----less</p>
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02/12/2019	Stack Test	Compliance	than 5% of Standard Results were below permit limits.
02/12/2019	NSPS (Part 60)	Compliance	AQD reviewed Air Products 1st Quarter 2018 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on April 18, 2018 and is required pursuant to 40 CFR 60.7 (d). No excess emissions were reported.
02/07/2019	NSPS (Part 60)	Compliance	Tank 55, an internal floating roof tank, will have an inspection completed before tank refill on or after March 5, 2019.
02/03/2019	Complaint Investigation	Non Compliance	Complaint Investigation performed February 3, 2019. Please see CA_A983148342 for related investigation performed on February 2, 2019.
02/02/2019	Complaint Investigation	Non Compliance	Complaint Investigation performed February 2, 2019. Please see CA_A983148343 for related investigation performed on February 3, 2019.
01/24/2019	CEM RATA	Compliance	Marathon Petroleum performed a RATA on the Alky and Crude Flares on November 28-29, 2018 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were : H2S RATA Results were Alky Flare H2S(ppmdv)----- -----2.9% -----less than 10% standard Crude Flare H2S(ppmdv)----- -----1.4% -----less than 10% standard Results were below permit limits.

Activity Date	Activity Type	Compliance Status	Comments
01/24/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the Alky DIB Reboiler Heater Stack on November 28, 2018 to comply with ROP MI-ROP-A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were : O2 and NOx</p> <p>RATA Results were O2(%dv)----- --0.04% -----less than +/- 1.0% dv NOx(ppmdv@0%O2)----- --3.2%-----less than 20% of RM NOx(lb/MMBTU)----- ---6.1%-----less than 20% of RM</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/17/2019	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the Coker Heater on August 15, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : NOx, VOC, CO and O2</p> <p>Test Results were:</p> <p>VOC (lb/MMBTU)----- -<0.0007----- below limit 0.0055</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.15----- -below +/- 1.0% of RM</p> <p>NOx(lb/mmBTU)----- -----11.1----- --below 20% of RM</p> <p>NOx(ppmdv@0%O2)----- -----7.6----- --below 20%of RM</p> <p>CO(lb/mmBTU)----- -----0.0----- below 10% of RM</p> <p>PM was tested separately and the emission test results showed that Marathon exceeded the permit limit of 0.0019 lb/MMBTU. All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/17/2019	Stack Test	Compliance	<p>Marathon performed stack testing on the Crude/Vacuum Heater stack on June 13, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : PM, FPM, H2SO4, VOC, NOx, O2, and CO</p> <p>Test Results were:</p> <p>PM (lb/MMBTU) ----- -0.0008----- below limit of 0.0019</p> <p>FPM (lb/MMBTU)----- 0.0016-----NA-</p> <p>H2SO4(lb/MMBTU)----- --0.0008-----N/A</p> <p>VOC (lb/MMBTU)----- --<0.0008-----below limit of 0.0055</p> <p>Summary of RATA results</p> <p>O2(%dv)----- -----0.03----- less than +/- 1.0%</p> <p>NOx(ppmdv@0%O2) ----- -----3.0----- less than 20% of RM</p> <p>NOx(lb/MMBTU) ----- -----5.5-----less than 20% of RM</p> <p>CO (lb/MMBTU)----- -----0.0-----less than 10 % of RM</p> <p>All test results indicated compliance with permit limits.</p>
01/17/2019	Release Reports	Compliance	<p>RETRACTION- Regarding October 29, 2018 Incident re:FCCU. After further review and calculation, Marathon concluded that a reportable quantity release of SO2 did not occur.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/10/2019	Stack Test	Compliance	<p>Marathon performed a Stack Test on the Delayed Coker Unit on June 20, 2018 to June 22, 2018 to comply with ROP: MI-ROP-A9831-2012c, which was issued on September 12, 2016. AECOM was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : VOC, H2S, PM</p> <p>Test Results were: H2S- 1.46 lb/cycle – VOC- 0 lb/cycle- Data indicates negative numbers but represented as zero. PM- .03 lb/cycle</p> <p>Based on the stack test results and limit of 487 cycles in the PTI, emissions should stay below permit limits.</p>
01/10/2019	Stack Test	Compliance	<p>Marathon performed its annual audit of the FCCU opacity monitor. The audit was performed on August 22, 2018. Teledyne Monitor Labs was the contractor to perform the audit. The audit was done in accordance with 40 CFR 60 Appendix F, Procedure 3. The annual audit is performed to conduct the primary zero alignment test. Test results indicate that calibration error was less than 3% and that the audit over three ranges was less than 1%.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/10/2019	Stack Test	Compliance	<p>Marathon Petroleum performed a RATA and stack test on the Complex 2 (East) SRU Incinerator (EU42-SULRECOV-S1) on July 24 -26, 2018 to comply with ROP MI-ROP-A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were : H2SO4, SO2, and O2</p> <p>Test Results were:</p> <p>H2SO4(lb/mmBTU)----- -----0.025-----no limit</p> <p>RATA Results were O2----- 0.03 % -----less than +/- 1.0%dv SO2(ppmdv @ 0% O2)----- 9.9 %-----less than 10% of Standard All results were below permit limits.</p>
01/10/2019	NSPS (Part 60)	Compliance	<p>Quarterly CEMS RATA/CGA- 2nd Quarter 2018</p> <p>Cylinder gas audit was performed on June 21, 2018. All performance tests passed.</p>
01/10/2019	Other		Review of 3rd quarter 2018 LDAR, Wastewater VOC, Benzene Waste NESHAP Report
01/10/2019	Other Non ROP	Compliance	Report received from TPU Staff R. Angelotti. Quality Assurance was done for December 12-13, 2017 testing of Zurn Boiler. PM, PM-10, VOC, and H2SO4 were sampled. Sampling and analytical methods in the report satisfied requirements of method.
01/10/2019	MACT (Part 63)	Compliance	Submittal of Semi-Annual MACT Report- No CMS > 5%. RATA was conducted on June 21, 2018. No equipment leaks not repaired within 5 days after detection. Cylinder gas audits were conducted on March 7, 2018.

Activity Date	Activity Type	Compliance Status	Comments
01/10/2019	Other Non ROP	Compliance	3rd Quarter 2018 LDAR, Wastewater VOC, Benzene Waste NESHAP Report. See Activity Report CA_A983147550.
01/08/2019	Other Non ROP	Unknown	Response to November 8, 2018 Violation Notice.
01/03/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the FCCU Regenerator on March 1, 2018 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were : SO2, NOx, CO, CO2 and O2</p> <p>RATA Results were O2----- -.26% -----less than +/- 1.0%dv CO2----- -.02% -----less than +/- 1.0%dv SO2(ppm @ 0% O2) ----- 7.2% ----- less than 20% of RM NOx(ppm @ 0% O2) ----- 9.1% ----- less than 20% of RM CO(ppm @0%O2)----- 5.9% ----- less than 10% of RM Results were below permit limits.</p>
01/03/2019	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the East and West Gas plant H2S CEMS on March 13-14, 2018 to comply with ROP MI-ROP=A9831-2012c. Clean Air Engineering was the stack testing contractor performing the RATA for Marathon Petroleum. Pollutants tested were : H2S</p> <p>RATA Results were: East Plant H2S(ppmdv)----- -----1.0-----less than 10%standard West Plant: H2S(ppmdv)----- -----1.1-----less than 10%standard Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/03/2019	Other Non ROP	Compliance	3rd Quarter 2018 LDAR, Wastewater VOC, Benzene Waste NESHAP Report. See Activity Report CA_A983147563.
01/03/2019	Other	Compliance	Review of 1st Qtr LDAR, Wastewater VOC, Benzene NESHAP Report.
12/27/2018	Other	Compliance	Review of 2nd quarter '18 LDAR Wastewater VOC Benzene Quarterly report.
12/27/2018	Other Non ROP	Compliance	Second Qtr 2018 LDAR, Benzene Waste NESHAP, and QQQ Report. See Activity Report CA_A983147388
12/27/2018	Rule 912	Non Compliance	Rule 912- November 30, 2018, a faulty relief valve on Propylene Propane Amine Scrubber in the Complex 3 Treater Unit lifter early and caused the Treater Unit Amine Stripper to foam and overflow. Amine unit not effective at removing hydrogen sulfide out of the West Plant Fuel Gas. Caused 3 hours of excess emissions over the 162 ppm limit.
12/27/2018	Release Reports	Compliance	RETRACTION- November 16, 2018 event at North Plant Amine Regeneration Unit. Upset occurred and shutdown of the North Plant Sulfur Recovery Unit. EPCRA release suspected and called in but after further review and calculation, MPC concluded that a RQ release of SO2 did not occur.
12/27/2018	Rule 912	Non Compliance	November 16, 2018- North Plant Amine Unit experienced an upset due to foaming in the Amine Regenerator. North Plant SRU Trains shut down. Acid gas system was idled and amine treating was no longer effective, causing H2s in West Plant Fuel Gas to exceed the permitted limit (160 ppm on a 3 hour average) for 3 hours.

Activity Date	Activity Type	Compliance Status	Comments
12/27/2018	Release Reports	Compliance	RETRACTION- November 1, 2018 event- A small leak was discovered on the outlet of the Amine Regeneration Unit overhead condenser. Because stream contained H2S and leak rate was unknown at the time, Marathon reported an EPCRA Release. After further review and calculation, Marathon concluded that a reportable quantity release of H2S did not occur.

Activity Date	Activity Type	Compliance Status	Comments
12/27/2018	NSPS (Part 60)	Compliance	<p>Notification of Startup- PTIs 118-15, 122-15</p> <p>Last tank in FGPVTANKS-S1 listed in PTI 122-15 was placed in service on June 21, 2018. The Following tanks were removed from service and demolished:</p> <p>22T80 22T84 22T92 22T98 22T81 22T89 22T93 22T99 22T82 22T90 22T94 22T190 22T83 22T91 22T95 22T191</p> <p>For PTI 118-15- Startup of new, reconstructed and/or modified emission units occurred on October 25, 2018. As of this date EU-CPFLARE-S1 was officially decommissioned and the additional flare gas recovery capacity upstream of EU-COKERFLARE-S1 was in place and operational on November 2, 2018.</p> <p>The new GOHT Heater (EU08GOHTCHARHTR2-S1) is subject to the fuel gas combustion devices under NSPS Subpart Ja and subject to the 40 ppm NOx concentration limit.</p> <p>New Process units subject to GGGa - EU08GOHTCHARHTR2-S1 Existing source that has been modified and are subject to the NSPS Subpart GGGa- EU08-GOHT-S1.</p> <p>Boiler MACT Subject Heater- GOHT Heater No. 2 - Natural Gas/Refinery Fuel Gas Fired- 115MMBTU/hr heat input capacity.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/20/2018	Rule 912	Non Compliance	Startup procedures occurred on October 24, 2018. FCCU had 7590 minutes of excess opacity (6 minute average of 20% is the limit) A Violation Notice was issued on December 20, 2018.
12/20/2018	Rule 912	Non Compliance	Upset in FCCU occurred on November 5, 2018. FCCU had 324 minutes of excess opacity (6 minute average of 20% is the limit) A Violation Notice was issued on December 20, 2018.
12/20/2018	Rule 912	Non Compliance	An upset occurred on November 14, 2018. FCCU had 648 minutes of excess opacity (6 minute average of 20% is the limit) A Violation Notice was issued on December 20, 2018.
12/13/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the CCR Inter Heater (EU14-CCRPLINTHR-S1) stack on June 27, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants Tested were: VOC, O2, NOx, and CO</p> <p>Test Results were: VOC (lb/MMBTU) ----- ---<0.00072----- 0.0055</p> <p>RATA Results: O2 (%dv)----- 0.13-----less than +/- 1.0%</p> <p>NOx(lb/MMBtu)-----7.8-- -----less than 20%</p> <p>RM CO(lb/MMBtu)-----0.0--- -----less than 10% RM</p> <p>All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/13/2018	Rule 912	Compliance	RETRACTION- Rule 912 event occurred over October 21, 2018 through October 23, 2018. The East Plant SRU was being started up after a refinery-wide maintenance outage. The unit was running on natural gas only, and no acid gas was being directed to the unit. The SRU operated in compliance with the alternative limits applicable to periods of startup and shutdown contained in 40 CFR Part 63, Subpart UUU, - 40 CFR 63.1568 (a)(4)(iii).
12/13/2018	Excess Emissions (CEM)	Compliance	AQD reviewed Marathon's 2nd Quarter 2018 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on July 31, 2018 and is required pursuant to 40 CFR 60.7 (d). 54 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 2nd Quarter. CEMS downtime was over 5% for the quarter for the following CEMS: West Plant Flare Gas H2S analyzer- 7.4%
12/12/2018	ROP Semi 1 Cert	Compliance	ROP Semi-Annual Report for Air Products- Several components were placed on Delay on Repair. Repairs will happened during Turnaround.
12/12/2018	CEM RATA	Compliance	AQD Staff reviewed RATA report from RATA performed on June 21, 2018 and determined that the following CEMS satisfied the annual RATA requirement in 40 CFR 60, Appendix B. Manufacturer- Infrared Industries Model IR 8400 DC Serial Number 4276
12/12/2018	Malfunction Abatement Plan	Compliance	Updated Malfunction Abatement Plan submitted by Air Products. It was updated to reflect the current catalyst replacement schedule.

Activity Date	Activity Type	Compliance Status	Comments
12/06/2018	Stack Test	Non Compliance	<p>Marathon Petroleum performed a stack test on the Coker Heater on August 15, 2018, to comply with ROP MI-ROP=A9831-2012c.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :PM and PM10</p> <p>Test Results were:</p> <p>PM(lb/mmBTU)----- -----0.0025-----more than 0.0019 lb/mmBTU PM10(lb/mmBTU)----- -----0.0048----- less than 0.0076 lb/mmBTU</p> <p>Run 1 had material in the rinse. Analysis of the droplet said that it was hydrocarbon. There was no definitive analysis. Staff from the Technical Programs Unit said the test was valid. The test results came back during the Turnaround. Retesting is scheduled to occur the week of December 3, 2018. A violation notice was issued on December 13,2018 for the exceedance of PM.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/06/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the CCR Charge Heater (EU14-CRPLCHARHTR-S1) stack on June 26, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were VOC, O2, NOx, and CO</p> <p>Test Results were: VOC (lb/MMBTU)----- <0.0007----- below limit of 0.0055</p> <p>RATA Results: O2 (%dv)----- 0.3-----less than +/- 1.0% NOx(lb/MMBTU)-----0.5 -----less than 20% RM CO (lb/MMBTU)----- 0.0-----less than 10% RM</p> <p>All test results were below permit limits.</p>
12/06/2018	Stack Test	Compliance	<p>Marathon performed stack testing on the NHT Charge Heater (EU16-NHTCHARHTR-S1) stack on May 25, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were NOx</p> <p>Test Results were: NOx (lb/MMBTU)----- 0.17----- below limit of 0.20</p> <p>All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/06/2018	Excess Emissions (CEM)	Non Compliance	<p>AQD reviewed Marathon's 3rd Quarter 2018 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on October 30, 2018 and is required pursuant to 40 CFR 60.7(d).</p> <p>54 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 3rd Quarter. CEMS downtime was over 5% for the quarter for the following CEMS: FCCU Opacity Monitor- 5.89% FCCU Regenerator CEMS- 7.24% Crude Glare Gas H2S analyzer - 8.01% Coker Flare H2S analyzer- 12.68% Unifiner Flare H2S- 13.31%</p> <p>TPU Staff Issued a Violation Notice for downtime on November 8, 2018.</p>
12/06/2018	CEM RATA	Compliance	<p>Marathon submitted results of a RATA of the CEMS at the Light Products Terminal.</p> <p>Results showed the monitor has passed the required 10% relative accuracy</p>
12/06/2018	NSPS (Part 60)	Compliance	<p>Submittal of Monitoring Plan for GOHT 2 Heater. Heater commenced operation on October 25, 2018.</p>
12/04/2018	Stack Test Observation	Compliance	<p>Coker Heater PM Stack Test retest.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/29/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the Complex 6 (North) SRU Incinerator (EU72-SULRBLOCK2-S1) stack on August 14, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Test Results were: H2SO4 (lb/MMBTU) ----- -----0.016----- No Limit</p> <p>RATA Results: O2 (%dv)----- 0.1-----less than +/- - 1.0%</p> <p>SO2(ppm @0%O2)----- 1.5%-----less than 20% RM</p> <p>All test results were below permit limits.</p>
11/29/2018	CEM RATA	Compliance	<p>Marathon performed a RATA on the B&W Boiler stack on July 10 through July 12 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : O2 and NOx</p> <p>RATA Results: O2 (%dv)----- 0.74-----less than +/- 1.0%</p> <p>NOx(ppmdv)-----1.5%--- -----less than 10% RM</p> <p>NOx (lb/MMBTU)----- 0.004-----less than +/- 0.020</p> <p>All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/29/2018	CEM RATA	Compliance	<p>Marathon performed a RATA on the GOHT heater stack on July 26 through July 27, 2018, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : O₂, CO, and NO_x</p> <p>RATA Results: O₂ (%dv)----- 0.3-----less than +/- 1.0% NO_x(lb/MMBTU)----- 10.8%-----less than 20% RM CO (lb/MMBTU)-----0.5-----less than 5% of Standard</p> <p>All test results were below permit limits.</p>
11/29/2018	CEM RATA	Compliance	<p>Submittal of Quality Assurance Procedures. Cylinder gas audits performed on Sept. 11-12, 2018. Problem occurred with O₂ analyzer which caused O₂ CGA to fail. All other analyzers passed the CGA. O₂ Analyzer was repaired- Successful CGA was conducted on Sept. 12, 2018. Refinery shutdown on Sept. 19.</p>
11/29/2018	Excess Emissions (CEM)	Compliance	<p>3rd Quarter CEMS excess emissions. No excess emissions were reported. Refinery shutdown on September 19, 2018.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/29/2018	Excess Emissions (CEM)	Compliance	<p>AQD reviewed Marathon's 1st Quarter 2018 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on April 30, 2018 and is required pursuant to 40 CFR 60.7 (d).</p> <p>54 analyzers were included in this report. Marathon reported that excess emissions were below 1% the quarter for all CEMS during the 1st Quarter except FCCU Opacity and FCC CO Monitor at 1.25 % and 1.29, respectively. CEMS downtime was over 5% for the quarter for the following CEMS:</p> <p>Crude Flare- 6.2%</p>
11/15/2018	ROP Semi 1 Cert	Compliance	<p>AQD received the ROP Semi-Annual Report Certification for the period covering January - June 2018. The report indicated 2 hours of downtime for the NOx and CO CEMS over the reporting period. CEMS were down for maintenance. This equates to 0.05% downtime indicating that CEMS were on substantively.</p>
11/15/2018	CEM RATA	Compliance	<p>Air Products performed a CEMS RATA on the Hydrogen Plant Heater's CO CEMS on July 31, 2018 to comply with ROP MI-ROP -A9831-2012c, which was issued on September 12, 2012. This was a retest of the RATA that occurred in March 2018. Clean Air Engineering was the stack testing contractor performing the stack services for Air Products.</p> <p>Test Results were: CO(ppmdv)----- ----- 0.6ppm - within +/- 5 ppmdv CO (lb/hr)----- ----- 0.4-----within 5% of Standard</p> <p>All results were within permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/09/2018	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test and RATA on the B&W Boiler on March 15-16, 2018 to comply with PTI 63-08D, which was issued on May 15, 2014.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were :PM, H2SO4, VOC, and NOx</p> <p>Test Results were:</p> <p>PM (lb/mmBTU)----- --0.0011 -----less than 0.0019</p> <p>PM10 (lb/mmBTU)----- ----0.0026 -----less than 0.0076</p> <p>H2SO4(lb/MMBTU)----- -3.5E-04-----No Limit</p> <p>VOC (lb/mmBTU)----- ---<0.00068 -----less than 0.0055</p> <p>RATA Results were:</p> <p>O2(%dv)-----0.38----- less than +/- 1.0% dv</p> <p>NOx (ppmdv)----- -5.7-----less than 10% of RM</p> <p>NOx(lb/mmBTU) ----- -----0.005-----less than +/- - .020 abs diff</p> <p>Results were below permit limits.</p>
10/25/2018	CEM RATA	Compliance	CEM RATA Results for Air Products. Annual verification of emission rates was performed on Hydrogen Heater. The annual RATA for NOx and CO CEMS was conducted and met allowable limits.
10/25/2018	NSPS (Part 60)	Compliance	Quarterly CEMS Excess Emissions Report. No excess emissions were reported.
10/11/2018	ROP Annual Cert	Compliance	Air Products ROP Annual Certification. Deviations due to downtime.
10/11/2018	Other Non ROP	Compliance	2017 Annual DHOP Annual Emissions and Net Actual Emissions Increase Summary for 2017. Results continue to show that significant net increase did not occur as a result of DHOP.

Activity Date	Activity Type	Compliance Status	Comments
10/11/2018	NSPS (Part 60)	Compliance	Notice for Floating Roof in Tank No. 32 and 33 returned to service. Tank 33 is external floating roof tank undergoing a solids removal clean out and have inspection completed before tank refill on or after July 2, 2018. Tank 32 is an external floating roof tank and will also undergo a solids removal cleanout. Tank is going to be inspected and refilled on or after August 2, 2018.
09/13/2018	Release Reports	Compliance	RETRACTION- After further review and calculation, Marathon requested that their previous report be retracted. An investigation is being conducted to determine cause of incident.
09/13/2018	Release Reports	Compliance	RETRACTION- Pinhole leaks were discovered on the spillback line of the Amine Stripper reflux pump. Notifications were made because the rich amine stream contains high H ₂ S and the leak rate was unknown at the time. After further review and calculation, Marathon concluded that a reportable quantity release of H ₂ S did not occur.
09/06/2018	ROP SEMI 2 CERT	Non Compliance	Cursory review of Semi-Annual Report. Several deviations need to be followed up on to determine if ongoing violation or isolated incident.
08/16/2018	Other Non ROP	Compliance	Mark Dziadosz, of TPU, issued a memo re: FCCU Charge Heater Emission Test Report Review. Sampling and analytical methods in the report satisfy the requirements of the method. PM results were below emission limits set forth in ROP.
08/15/2018	Stack Test Observation	Unknown	Coker Heater Stack Test and Rata - Arrived at 10:10AM. Accompanied by TPU staff M. Dziadosz and R. Hines. Met with MPC staff P. Bortolussi. RATA and PM was occurring. Clean Air Engineering was stack testing contractor on site. NOx CEMS RATA Run 1 started at 9:25AM and PM Run 1 started at 9:42AM. PM Run ended at 11:55AM. The filter appeared clean and the rinse appeared clear and free of debris. We left the facility at 2:35PM.

Activity Date	Activity Type	Compliance Status	Comments
08/01/2018	Odor Evaluation	Compliance	August 2018 - Odor Surveillance
07/17/2018	Complaint Investigation		
07/11/2018	NSPS (Part 60)	Compliance	Notice provided that inspections of external floating roof tank primary and secondary seals were to be conducted on May 25, 2018 for Tanks 109, 112, 113, 115, 129, 130, 76T601, 29T32, 29T33, 29T40, and 29T41.
07/05/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the FCCU Charge Heater on April 26 and May 10, 2018. Clean Air Engineering was the stack test contractor. The pollutants were:</p> <p>PM, NOx, and VOC.</p> <p>RATA was also performed on CO and O2 CEMS</p> <p>Results were</p> <p>PM(firing refinery gas & disulfide off-gas)(lb/MMBTU)-----0.22----- -----NA</p> <p>NOx(lb/MMBTU)----- -----0.03----- ---less than 0.05</p> <p>PM (firing refinery gas) (lb/MMBTU)----- ----0.0014-----less than 0.0019</p> <p>VOC(lb/MMBTU)----- -----<0.00078----- -----less than 0.055</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.08----- -----less than +/- 1.0%dv</p> <p>CO(ppm)----- -2.4----- -less than +/- 5ppm.</p> <p>All results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
07/05/2018	Stack Test	Compliance	<p>Marathon Petroleum performed a RATA and stack test on the Vacuum2 Heater on May 24, 20184 to comply with ROP MI-ROP=A9831-2012c. Results were used to demonstrate compliance.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were : VOC, NOx, CO and O2</p> <p>Test Results were:</p> <p>VOC(lb/mmBTU)----- -----<0.0007----- less than 0.0055 lb/mmBTU</p> <p>RATA Results were O2----- .30 % less than +/- 1.0%dv NOx(lb/MMBTU)----- 7.3%-----less than 20% of RM NOx(ppmdv) ----- 4.4% ----- less than 20% of RM CO(lb/mmBTU)----- 0.0 ----- less than 10% of RM</p>
07/03/2018	Stack Test	Compliance	<p>Marathon performed stack testing on the NHT Stripper Reboiler Heater on April 24, 2018. Clean Air Engineering was the stack test contractor. The pollutants were:</p> <p>NOX</p> <p>Results were</p> <p>NOx(lb/MMBTU)----- -----0.11----- -----less than 0.20</p> <p>All results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
07/03/2018	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test on the FCCU Regenerator Stack on February 13-14, 2018 to comply with MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon Petroleum.</p> <p>Pollutants tested were : PM, PM10, VOC, NH3, H2SO4, and VOC</p> <p>Test Results were: PM (lb/Mlb coke)----0.3 ----- less than 0.8 PM10 (lb/Mlb coke)--- 0.9 ----- ---- less than 1.1 Ammonia (lb/Mlb coke)----- 0.13----- no limit VOC (Ton/yr)-----8.5----- ----- less than 21 VOC (lb/Mlb coke)----- ---0.08----- no limit Sulfuric Acid Mist(lb/Mlb coke)---- -----0.034----- no limit Both ESPs were running during the time of the test. Coke Burn Rate was 24,383 lb/hr. Feed Rate was 40,997 bpd. Aqueous Ammonia Injection rate was 32.1 lb/hr.</p> <p>Results were below permit limits.</p>
07/02/2018	Odor Evaluation	Compliance	July 2018 -Odor Surveillance
06/27/2018	Stack Test Observation		CCR Interheater
06/21/2018	CEMS Test Observation	Compliance	Light Products Terminal CEMS RATA
06/21/2018	Stack Test Observation		Delayed Coker Unit
06/21/2018	Scheduled Inspection	Compliance	Delayed Coker Unit
06/21/2018	Scheduled Inspection	Compliance	Light Products Terminal
06/13/2018	Stack Test Observation		Crude/Vac Heater Stack Test
06/05/2018	Telephone Notes	Compliance	Crude/Vac Heater Stack Test
06/05/2018	Stack Test Observation	Compliance	Crude/Vac Heater

Activity Date	Activity Type	Compliance Status	Comments
06/01/2018	MAERS	Compliance	Spot checks were done on several emission units. Emissions were generally the same compared to the previous year. Some Criteria pollutants went up while others went down. CEMS records and emission test were the basis for many of the emission units. More review needs to be done with storage tanks. Staff will attempt to conduct inspections at the storage tanks this fiscal year.
06/01/2018	Odor Evaluation	Compliance	June 2018 - Odor Surveillance
05/24/2018	Other Non ROP	Compliance	Marathon provided notice of a continuous release report of Hydrogen Cyanide. The facility was requested to conduct a stack test on the FCCU per the Refinery MACT , Subpart CC to determine Emissions. Results show that Hydrogen Cyanide is emitted at a rate of 93 lbs/day. The Reportable Quantity is 10 lbs/day per the EPCRA regulation. Each year, the Refinery reports that the continuous release is ongoing.
05/07/2018	Rule 912	Compliance	Rule 912 SO2 Excess emissions Event date: April 24-25, 2018. Tail Gas Treater Unit heater experienced an emergency due to loss of air flow after the completion of a routine blower switch. Thermal oxidizer exceeded its permitted SO2 limit for 11 hours. During this time, Marathon complied with alternative limits applicable to periods of startup and shutdown contained in 40 CFR Part 63 Subpart UUU.
05/03/2018	Odor Evaluation	Compliance	May 2018 - Odor Surveillance
04/26/2018	Scheduled Inspection	Compliance	FCCU Charge Heater
04/24/2018	Scheduled Inspection	Compliance	NHT Stripper
04/24/2018	Stack Test Observation		
04/12/2018	Rule 912	Compliance	126 minutes of opacity exceedances. Facility explained that due to no combustion, unlikely that any catalyst left the Regenerator stack.

Activity Date	Activity Type	Compliance Status	Comments
04/12/2018	Rule 912	Compliance	FCCU shutdown for Flue gas Cooler steam leak repairs. Opacity exceeded 6minute average over 200 instances during the event. Minor opacity exceedances year to date from FCCU. AQD staff will monitor and determine if further action is warranted.
04/09/2018	NSPS (Part 60)	Compliance	4th Quarter 2017 CEMS Excess Emissions Report- No excess emissions and downtime was less than 1% for all monitors.
04/02/2018	Odor Evaluation	Compliance	April 2018 - Odor Surveillance
03/28/2018	Rule 912		<p>Treva Fromby called in a Rule 912 report that consisted of the following information: The exceedances occurred in association of start-up of the FCC Unit.</p> <ol style="list-style-type: none"> 1. During the time period of March 23, 9:47AM and March 25, 4:00PM the unit experienced excess opacity, as seen on the COMS unit of primarily 20-30%, but occasionally up to 40%. These opacity exceedances were called intermittent. 2. The CEMS indicated that CO limits were also exceeded for about 24 hours during this time. 3. ESP on the regen was underpowered during approximately 4 hours of this time period. 4. Ms. Formby stated that a written report is be completed and will be sent to the District. <p>Ms. Formby stated that she had attempted to call her inspector, Jorge Acevedo and was not able to get hold of him on 3/28. She stated she would like a record of her call to be made so that it would be considered timely. This MACES report will count as that record. Ms. Formby requested that the report number be emailed to her at tformby@marathodpetroleum.com. JD will inform J. Acevedo that this has been requested.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/28/2018	Stack Test	Compliance	<p>Marathon performed stack testing on the Complex 2 SRU Incinerator on October 19, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, PM10, VOC, and NOx</p> <p>Test Results were:</p> <p>PM (lb/hr) -----0.17-- ----- below limit of 1.75</p> <p>PM10 (lb/hr)-----0.51- ----- below limit of 1.75</p> <p>VOC(lb/mmBTU)----- <0.0030-----below limit of 0.0055</p> <p>NOx (lb/hr)-----1.4---- ----- below limit 7.5.</p> <p>All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/28/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the Coker Heater on September 12 through September 13, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, PM10, NOx, VOC, NSFPM, and H2SO4</p> <p>Test Results were: PM (lb/mmbtu) ----- 0.0009----- below limit of 0.0019 PM10 (lb/mmbtu)----- 0.0038----- below limit of 0.0076 NSFPM (lb/mmBTU)----- --0.0005-----NA H2SO4(lb/mmBTU)----- 0.0010-----NA VOC (lb/MMBTU)----- -<0.0007----- below limit 0.0055</p> <p>RATA Results were: O2(%dv)----- -----0.18----- -below +/- 1.0% of RM NOx(lb/mmBTU)----- -----6.0----- -below 20% of RM NOx(ppmdv@0%O2)----- -----2.7----- --below 20%of RM</p> <p>All test results were below permit limits.</p>
03/22/2018	NSPS (Part 60)	Compliance	<p>Secondary Seal Inspection of External Floating Roof Tanks 108 and 128. Notice provided pursuant to NSPS Subpart Kb. Seal Inspections are scheduled to take place on or after March 23, 2018.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/22/2018	NSPS (Part 60)	Compliance	<p>AQD reviewed Marathon's 4th Quarter 2017 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on January 31, 2018 and is required pursuant to 40 CFR 60.7(d).</p> <p>52 analyzers were included in this report. Marathon reported that excess emissions were below 1% for all CEMS during the 4th Quarter.</p>
03/08/2018	MACT (Part 63)	Compliance	Subpart CC, UUU, GGGGG, ZZZZ, DDDDD. See Activity Report CA_A983143543
03/08/2018	Other	Compliance	Review of Semi-Annual MACT Report
03/06/2018	Stack Test Observation	Compliance	Hydrogen Heater Stack Test and RATA
03/02/2018	Odor Evaluation	Compliance	March 2018 - Odor Surveillance
02/28/2018	Stack Test	Compliance	<p>Marathon performed stack testing on the Fuel Oil Heater Stack on December 20-22, 2017. Clean Air Engineering was the stack test contractor. The pollutants were:</p> <p>PM, PM10, H2SO4, NOx, and CO.</p> <p>Results were</p> <p>PM(lb/MMBTU)----- -----0.0016----- -----less than 0.0019</p> <p>PM10(lb/MMBTU)----- -----0.0045----- -----less than 0.0076</p> <p>H2SO4(lb/MMBTU)----- -----0.0003----- -----NA</p> <p>NOx(lb/MMBTU)----- -----0.01----- -----less than 0.10</p> <p>CO (lb/MmBTU)----- -----0.01----- -----less than 0.02</p> <p>All results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/28/2018	Stack Test	Compliance	<p>Marathon performed stack testing on the Zurn Boiler on December 12-13, 2017. Clean Air Engineering was the stack test contractor. The pollutants were:</p> <p>PM, PM10, H2SO4, and VOC.</p> <p>RATA was also performed on NOx, CO, and O2 CEMS</p> <p>Results were</p> <p>PM(lb/MMBTU)----- -----0.0005----- -----less than 0.0019</p> <p>PM10(lb/MMBTU)----- -----0.0021----- -----less than 0.0076</p> <p>H2SO4(lb/MMBTU)----- -----0.00007----- -----NA</p> <p>VOC(lb/MMBTU)----- -----<0.0006----- -----less than 0.055</p> <p>RATA Results were:</p> <p>O2(%dv)----- -----0.31----- -----less than +/- 1.0%dv</p> <p>NOx(lb/mmbtu)----- -----15.7----- -----less than 20% of RM</p> <p>CO(lb/MMBTU)----- -----0.12----- -----less than 5% of Std.</p> <p>All results were below permit limits.</p>
02/27/2018	CEMS Test Observation	Compliance	
02/27/2018	Odor Evaluation	Compliance	

Activity Date	Activity Type	Compliance Status	Comments
02/26/2018	CEM RATA	Compliance	<p>Marathon Petroleum performed a RATA on the Alky and Crude Flare on November 28-29, 2017 to comply with their ROP.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were :H2S</p> <p>RATA Results were:</p> <p>Alky Flare:</p> <p>H2S(ppmdv)-----1.4----- -- less than 10% of Standard.</p> <p>Crude Flare:</p> <p>H2S(ppmdv) ----- 8.1% ----- less than 10% of Standard.</p> <p>Results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
02/26/2018	Stack Test	Compliance	<p>Marathon Petroleum performed a stack test and a RATA on the Alky DIB Reboiler Heater on November 30-December 1, 2017 to comply with ROP No. MI-ROP-A9831-2012c.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Air Products. Pollutants tested were :PM, PM2.5, PM10, H2SO4, VOC, NOx, and CO</p> <p>Test Results were:</p> <p>PM (lb/mmBTU)----- --0.0005--- -----less than 0.0019 PM2.5 (lb/mmBTU)----- ----0.0017 -----less than 0.0076 PM10 (lb/mmBTU)----- ----0.0017 -----less than 0.0076 H2SO4(lb/MMBTU)----- -0.0001 -----No Limit VOC (lb/mmBTU)----- ----<0.0007 -----less than 0.0055 CO (lb/MMBTU)----- <0.0004-----less than 0.02</p> <p>RATA Results were:</p> <p>O2(%dv)-----0.07----- less than +/- 1.0% dv NOx (lb/mmBTU)----- ----7.8-----less than 20% of RM NOx (ppmdv@0%O2) ----- -----9.2-----less than 10% of RM</p> <p>Results were below permit limits.</p>
02/22/2018	NSPS (Part 60)	Compliance	<p>Quarterly Quality Assurance. Quarterly CGA was performed on December 20, 2017. Results were acceptable.</p>
02/22/2018	NSPS (Part 60)	Compliance	<p>Excess Emission Report for Air Products.</p> <p>-No excess emissions for NOx (lb/MMBtu) or (ppm) -No excess emissions for CO (tpy)</p>

Activity Date	Activity Type	Compliance Status	Comments
02/21/2018	CEM RATA	Compliance	<p>Marathon Petroleum contracted Clean Air Engineering to install a temporary continuous emissions monitoring system (CEMS) on the Crude Flare header at the Detroit Refinery.</p> <p>RATA was performed on March 17, 2017. Results were:</p> <p>TRS(ppmdv)----- -----08.2%----- -----less than 20% of RM.</p> <p>The RATA passed.</p>
02/20/2018	Other	Compliance	Review of 1st Quarter 2017 LDAR, Benzene Waste NESHAP, and QQQ Report.
02/20/2018	Other Non ROP	Compliance	First Quarter 2017 LDAR, Benzene Waste NESHAP, and QQQ Report . See Activity Report CA_A983143347.
02/20/2018	NSPS (Part 60)	Compliance	Notification of Initial Startup of Boiler- 40 CFR 60, Subpart Dc. MPC operates a small portable boiler that meets definition of a temporary boiler. Boiler exceeded 180 consecutive days operating due to maintenance and unexpected shutdown of hydrogen plant. Therefore, the boiler ceased operating under the definition of temporary boiler.
02/20/2018	Rule 912	Non Compliance	Rule 912 Report- October 27, 2017, two of the six ESP catalyst hopper vibrators in the FCCU were determined to be malfunctioning, causing catalyst to accumulate on the rods in the ESPs. The accumulated catalyst caused increased resistance in the rods, which, in turn, caused the total secondary current in the ESPs to fall below the permitted 3 hour average minimum from October 27 at 8PM to October 28, 2017 at 3:00AM. FCCU opacity remained below permitted limits during this time period. AQD will revisit to see if this becomes pattern.

Activity Date	Activity Type	Compliance Status	Comments
02/20/2018	Release Reports	Compliance	On December 27, 2017, a hole in the piping from the Disulfide Oil Separator to the flare was found in the Merox unit. The release was initially thought to be vapor containing Carbon Disulfide. The release was later determined to be Dimethyl Disulfide, a nonhazardous substance.
02/20/2018	MACT (Part 63)	Compliance	Summary Report- Gaseous and Opacity Excess Emission & Continuous Monitoring System Performance For the reporting period , no excess emissions or exceedances occurred. The CMS downtime did not exceed 5% of the total operating time.
02/20/2018	MACT (Part 63)	Compliance	MACT Periodic Report Subpart CC; Subpart UUU; Subpart GGGGG; Subpart ZZZZ; and Subpart DDDDD. No compliance issues identified.
02/20/2018	NSPS (Part 60)	Compliance	30 day notice provided for Tank 33. Tank 33 is an external floating roof tank undergoing a solids removal clean out and will have an inspection completed before tank refill on or after November 30th, 2017.
02/20/2018	MACT (Part 63)	Compliance	
02/20/2018	NSPS (Part 60)	Compliance	Quarterly GEMS RATA/CGA.
02/20/2018	Other	Compliance	Review of 2nd quarter 2017 LDAR, Wastewater VOC, Benzene Waste NESHAP.
02/20/2018	Other Non ROP	Compliance	Quarterly LDAR, Wastewater VOC, BWON Report. See Activity Report- CA_A983143347
02/20/2018	Other Non ROP	Compliance	Quarterly LDAR, Wastewater VOC, BWON Report. See Activity Report- CA_A983143354
02/20/2018	Other	Compliance	Review of 3rd Quarterly Report LDAR, Wastewater VOC, BWON.
02/20/2018	Other	Compliance	Review of 4th Quarter 2017 LDAR, Wastewater VOC, BWON Report.
02/20/2018	Other Non ROP	Compliance	Quarterly LDAR, Wastewater VOC, BWON Report See Activity Report -CA_A983143355
02/14/2018	Stack Test Observation	Compliance	FCCU PM Testing
02/02/2018	Odor Evaluation	Compliance	February 2018 - Odor Surveillance

Activity Date	Activity Type	Compliance Status	Comments
02/01/2018	ROP Other	Compliance	Addition of compliance contact- Greg Moore- Environmental Compliance Manager.
02/01/2018	MAERS	Compliance	Revisions to Reporting Year 2016.
02/01/2018	MAERS	Compliance	Revisions to MAERS Reporting Year 2015
02/01/2018	Release Reports	Compliance	<p>On June 7, 2017, the A & B Trains of the North Plant Sulfur Recovery Unit shut down due to foaming in the North Plant Amine Recovery Unit. During the incident, West Plant Fuel Gas exceeded the 160 ppm 3 hour average H2S limit for 11 hours contributing to the event. June 7 SO2 released - 8999 lbs.</p> <p>On June 8, the North Plant SRU shutdown due to foaming issues. After further review, Marathon concluded that a Reportable Quantity release of SO2 did not occur.</p>
02/01/2018	Release Reports	Compliance	On July 11, 2017, a failure occurred on steam line that was routed to the bottom of a process safety valve at the top of the Coker Drum. When the steam line proke, it created a path from the Coke Drum to the atmosphere. A total of 772 lbs of H2S was released over a 10.42 hour period.
01/30/2018	MAERS	Compliance	Revision of air emissions for Tank 114.
01/30/2018	MAERS	Compliance	Revision of air emissions for Tank 114.
01/30/2018	MAERS	Compliance	Revision of air emissions for Tank 114.
01/30/2018	MAERS	Compliance	Revision of air emissions for Tank 114.
01/30/2018	MAERS	Compliance	Revision of air emissions for Tank 114.
01/30/2018	MACT (Part 63)	Compliance	Update to MACT Subpart UUU SSMP. CCR Regenerator Vent Gas limit change from 350 to 340.
01/29/2018	NSPS (Part 60)	Compliance	Quarterly Quality assurance procedures of the CEMS
01/29/2018	ROP Other	Compliance	<p>Rule 219 Notification- Change in Ownership of Certain Logistics Assets.</p> <p>Change in ownership and operational control became effective on October 1, 2017.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/19/2018	Other Non ROP	Compliance	Notification of Temporary Boiler. Removal of Temporary Boiler occurred on December 1, 2017.
01/19/2018	Release Reports	Compliance	RETRACTION- On November 12, 2017, high level in the North Plant Amine Regeneration Unit caused liquid carryover to the North Plan Sulfur Recovery Unit Amine Acid Gas Knockout Pot. This led to a safety shutdown of both the A and B trains of the SRU. This led to high sulfur in the West Plant Fuel Gas system resulting in SO2 emissions from certain furnace stacks. Also, the incident caused high SO2 emissions from the SRU thermal oxidizer. After further calculation, the Refinery concluded that a reportable quantity release did not occur.
01/19/2018	NSPS (Part 60)	Compliance	Marathon provided notice of an unplanned seal inspection on internal floating roof on Tank 104.
01/18/2018	Odor Evaluation	Compliance	January 2018 - Odor Surveillance
01/17/2018	NSPS (Part 60)	Compliance	Notice for external floating roof tank secondary seal inspection of the API separator.
01/17/2018	Rule 912	Compliance	<p>After planned maintenance of the spare primary absorber charge pump in the Fluid Catalytic Cracking Unit, the main primary absorber charge pump lost suction and tripped offline. The Refinery attempted to re-start both pumps without success. Due to the loss of flow, the wet gas compressor had to be shutdown. The FCCU including ESPs was shutdown. During this time, carbon monoxide (CO) and PM exceeded their permitted limits:</p> <p>FCCU exceeded 500 ppm 1 hour average CO limit for 4 hours PM and PM 10 limits of 0.8 and 1.1 lb/1000 lb coke burn, respectively, were exceeded for 18 hours.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/17/2018	Rule 912	Non Compliance	<p>Failure occurred on a steam line that was routed to the bottom of a process safety valve at the top of the Coker Drum. When the steam line broke it created a path from the Coke Drum to the atmosphere. The refinery scheduled an early drum switch to minimize the release. During this time period it was possible that the opacity of steam/coke drum vapor mixture exceeded the permitted opacity limit. Refinery stated that 932 lbs of hydrogen sulfide and 39,367 lbs of VOCs were released from the Coke Drum.</p>
01/17/2018	Rule 912	Non Compliance	<p>On December 14, 2017, one of three transformers serving the West ESP in the FCCU malfunctioned. The primary power and secondary current in the West ESP fell, but remained above the permitted limits. On December 17, 2017, secondary current in the ESPs fell below the permitted 3-hour average minimum until 6PM on December 17, 2017. Opacity remained below permitted limits. Total secondary current (3 hr average) and Primary Power (3 hour average) were below limits for 18 hours. ESP Contractor was able to provide assistance and Refinery was able to put transformer back on line on at full capacity on December 18, 2017 at 11:52AM.</p>
01/11/2018	NSPS (Part 60)	Compliance	<p>AQD reviewed Marathon's 3rd Quarter 2017 report for their Continuous Emissions Monitoring System(CEMS). The report was submitted on October 30, 2018 and is required pursuant to 40 CFR 60.7(d).</p> <p>52 analyzers were included in this report. Marathon reported that excess emissions were below 1% for all CEMS during the 3rd Quarter.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/11/2018	NSPS (Part 60)	Compliance	<p>Air Products submitted their Semi-Annual Report for QQQ, ,CC, and GGGa/VVa reporting.</p> <p>For QQQ, visual inspections were conducted which verified that junction box covers were in place with a tight seal around the edge and that water levels were appropriate. Monthly inspections are performed. During inspection of drain hubs IDS "A" and IDS "B", water seals were found empty. Staff immediately repaired the low water levels.</p> <p>For Subpart GGGa/VVa, No components were put on Delay of Repair. 1635 components were monitored. 3 were leaking and fixed within 15 time frame with exception to the components placed on Delay of Repair.</p>
01/11/2018	Release Reports	Compliance	<p>Due to leaking block valve, vapor containing high H2S flowed from the North Plant Amine Recovery Unit to the atmospheric slop tank 508 and vapor was emitted through the tank vents. 580 pounds of H2S were released over a 1.5 hour time period. Leak was contained and investigation started to determine cause of leak.</p>
01/11/2018	Release Reports	Compliance	<p>Due to unexpected shutdown at Air Products, loss of hydrogen feed caused upsets in the DHT and GOHT which shut down Flare Gas Recovery Compressor. Material containing H2S was flared at the Unifiner Flare. SO2 emitted was 3272 pounds over 24 hours.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/10/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the DHT Heater (EU77-DHTHTR-S1) stack on November 8 through November 9, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, PM10, NSFPM, H2S04, VOC, and NOX</p> <p>Test Results were: PM (lb/MMBTU) ----- -0.0004----- below limit of 0.0019 PM10 (lb/MMBTU)----- -0.0021----- below limit of 0.0076 NSFPM (lb/MMBTU)----- --0.0002----- no limit H2S04(lb/MMBTU)----- 0.0003----- no limit VOC (lb/MMBTU)----- <0.0007----- below limit of 0.0055</p> <p>RATA Results: O2 (%dv)----- 0.02-----less than +/- 1.0% NOx(ppm @0%O2)----- 2.0%-----less than 20% RM</p> <p>All test results were below permit limits.</p>

Activity Date	Activity Type	Compliance Status	Comments
01/10/2018	Stack Test	Compliance	<p>Marathon performed stack testing and a RATA on the Complex 6 SRU Incinerator September 14, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, PM10, VOC, and NOX</p> <p>Test Results were:</p> <p>PM (lb/hr) -----0.41-- ----- below limit of 2.85</p> <p>PM10 (lb/hr)-----0.76- ----- below limit of 2.85</p> <p>VOC (lb/MMBTU)----- <0.0024----- below limit of 0.0055</p> <p>NOx (lb/MMBTU)----- -0.06-----below limit of 0.20</p> <p>RATA Results:</p> <p>O2 (%dv)----- 0.06-----less than +/- 1.0%</p> <p>SO2(ppm @0%O2)----- 8.4%-----less than 20% RM</p>
01/03/2018	Complaint Investigation	Compliance	Follow up on Complaints
12/21/2017	Other Non ROP	Compliance	Notification of Temporary Boiler Removal. Actual date of removal of the Temporary, Portable Boiler was December 1, 2017.
12/14/2017	NSPS (Part 60)	Compliance	FCCU Annual Audit of the Opacity Monitor. Audit performed on 8/22/17. Performed Low, Mid, and High Range according to NSPS and calibration error was less than 3%.


Activity Date	Activity Type	Compliance Status	Comments
12/14/2017	Stack Test	Compliance	<p>Marathon performed stack testing on the FCCU Charge Heater stack on September 26 through September 28, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : PM, PM10, H2S04, and SO2</p> <p>Test Results were: PM10 (lb/MMBTU) ----- ---0.0110----- no limit while burning disulfide off gas but emission factor calculated PM10 (lb/MMBTU)----- -0.0031----- below limit of 0.0076 H2SO4(lb/mmBTU)----- 0.00546----- no limit SO2 (lb/mmBTU)----- -.148 lb/mmBTU----- emission factor.</p> <p>All test results were below permit limits.</p>
12/12/2017	Release Reports	Unknown	<p>EPCRA Release Report- Power Outage occurred in a substation resulting in upsets in multiple units including the Coker Unit, the North Plant Sulfur Recovery Unit, North Plant Amine Unit, and Air Products Hydrogen Plant. Flare Gas Recovery Compressor for Coker Flare tripped causing flaring.</p> <p>SO2 Emitted- 4298 pounds over 7 hours.</p>
12/11/2017	MACT (Part 63)	Compliance	<p>Initial Start up Notification for Zurn Boiler. Recently equipped with low-Nox burners. The Boiler was started up and produced steam on October 25, 2017.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/07/2017	CEM RATA	Compliance	<p>Marathon performed a RATA on the Complex 2 SRU Incinerator on September 29, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016.</p> <p>Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. Pollutants tested were : O2 and SO2</p> <p>RATA Results: O2 (%dv)----- 0.01-----less than +/- 1.0% SO2(ppm @0%O2)----- 8.3%-----less than 20% RM</p> <p>All test results were below permit limits.</p>
12/04/2017	Rule 912	Non Compliance	<p>Rule 912- Due to malfunction at North Plant Amine Recovery Unit, the A and B Trains of North Plant Sulfur Recovery Unit (NP ARU) shut down. North Plant Thermal Oxidizer exceeded its permitted limit for SO2. West Plant fuel gas also exceeded its permitted limit for hydrogen Sulfide.</p> <p>North Plant SRU exceeded 250 ppm 12 hour average SO2 limit for 19 hours West Plant fuel gas exceeded the 160 ppm 3 hour average H2S limit for 11 hours.</p>
12/01/2017	Odor Evaluation	Compliance	December 2017 - Odor Surveillance
11/30/2017	Rule 912	Non Compliance	<p>Rule 912</p> <p>West Plant fuel gas exceeded its 3-hour average H2S limit for 5 hours. Investigation is being conducted but preliminary findings indicate that the cause of the H2S exceedance was saturation of the amine in the North Plant Amine Regeneration Unit.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/29/2017	MACT (Part 63)	Compliance	<p>RICE MACT 120 day initial notification. Marathon purchased and installed a new API emergency generator. AQD staff requested the specification sheet for the generator to determine if installation of the generator was exempt under Rule 201. Marathon provided the specification sheet on November 19, 2017. Using the fuel consumption data and BTU value for diesel, it showed that Marathon was exempt using Rule 285 g.</p>
11/22/2017	Rule 912	Non Compliance	<p>Power Outage occurred at Refinery causing upsets in multiple units. The following emission limits were exceeded:</p> <p>West Plant Fuel gas exceeded 3 hour limit of 160 ppm for H2S. Cracking Plant exceeded opacity limit (6 min average) intermittently over 4 hours 22 minutes.</p>
11/16/2017	Stack Test	Compliance	<p>Marathon performed stack testing on the Crude/Vacuum Heater stack on August 22 through August 23, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon. This was a retest of the previously failed test. Pollutants tested were : PM, and PM10</p> <p>Test Results were: PM (lb/MMBTU) ----- -0.0018----- below limit of 0.0019 PM10 (lb/MMBTU)----- -0.0033----- below limit of 0.0076</p> <p>Non Sulfate Filterable PM was measured as well with results of 0.0006 lb/mmBTU.</p> <p>All test results indicated compliance with permit limits.</p>
11/16/2017	MACT (Part 63)	Compliance	<p>Submittal of Semi-Annual MACT Report- No CMS > 5%. RATA was conducted on June 8, 2017. No equipment leaks not repaired within 5 days after detection.</p>

Activity Date	Activity Type	Compliance Status	Comments
11/15/2017	Stack Test Observation	Compliance	DHT Heater Stack Test
11/15/2017	Rule 912	Non Compliance	Tail Gas Treater Heater No 2. in East Plant SRU shutdown. Attempt to restart heater failed due to malfunction of pilot igniters. East Plant SRU exceeded 250 ppm 12 hour SO2 limit for 17 hours. Charge was reduced to the DHT and Coker while increasing amine integration to North Plant Amine Unit. New Pilot igniters were ordered and the malfunctioning pilot igniters were replaced. on October 6, 2017.
11/15/2017	Excess Emissions (CEM)	Compliance	3rd Quarter 2017 CEMS Report- No excess emissions reported
11/15/2017	Release Reports	Compliance	RETRACTION- Reported SO2 release of over 500 lbs but after further review, it was calculated that the Refinery did not exceed that amount.
11/15/2017	NSPS (Part 60)	Compliance	30 day notice of Tank 32 Seal Inspection and tank refill.
11/15/2017	NSPS (Part 60)	Compliance	3rd Quarter 2017 Cylinder Gas Audits. All performance test passed their respective criteria.
11/08/2017	NESHAP (Part 61)	Compliance	Annual BWON Report- Annual TAB - 36.81, 6BQ- 2.88.
11/03/2017	Odor Evaluation	Compliance	November 2017 - Odor Surveillance
10/19/2017	ROP Semi 1 Cert	Compliance	There were deviations regarding downtime for the CO and NOx CEMS. Downtime was less than 5% of the total operating hours. H2S exceeded the 3 hour average limit. Fuel gas is monitored by the Refinery.
10/12/2017	ROP Semi 1 Cert	Compliance	ROP SemiAnnual Certification for Section 2 of the A9831 ROP.
10/12/2017	Release Reports	Compliance	Release Report-RETRACTION September 11, 2017- the Tail Gas Stripper was restarted after completing maintenance. Cold Feed was introduced into the stripper which led to a decrease in temperature in the tower. After further evaluation- notification was retracted.

Activity Date	Activity Type	Compliance Status	Comments
10/11/2017	CEM RATA	Compliance	<p>Marathon performed a RATA on the back up TRS CEMS for the Crude Flare on August 14, 2017, to comply with ROP MI-ROP-A9831-2012c, which was issued on September 12, 2016. Clean Air Engineering was the stack testing contractor performing the stack services for Marathon.</p> <p>Pollutants tested were : TRS</p> <p>RATA Results: TRS (ppm)----- --1.1-----less than 20% of RM</p> <p>All test results were below permit limits.</p>
10/03/2017	Odor Evaluation	Compliance	October 2017 - Odor Surveillance

Name: 

Date: 9-30-20

Supervisor: 