



HESS Department



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VIA FEDERAL EXPRESS

January 18, 2019

Mr. Jorge Acevedo
Michigan Department of Environmental Quality
Air Quality Division
3058 W. Grand Boulevard
Suite 2300
Detroit, MI 48202

RE: Response to 12/20/2018 Violation Notice Regarding Particulate Matter Emissions from Coker Heater and Excess Opacity from the FCCU; Marathon Petroleum Company LP, Michigan Refining Division – SRN A9831

Dear Mr. Acevedo:

This letter is in response to the December 20, 2018 Violation Notice (VN) issued to Marathon Petroleum Company LP, Michigan Refining Division (MPC). The VN requested a written response by January 10, 2018 (21 days from the date of the letter). Due to the holidays, your letter was not received until after January 1, 2019. Your January 3, 2019 email to Mr. Greg Bennethum granted an extension to January 18, 2019 for a response.

In the VN, Michigan Department of Environmental Quality, Air Quality Division (AQD), alleged that the following violations occurred:

Process Description	Rule/Permit Condition Violated	Comments
Coker Heater (EU70-COKERHTR-S1)	ROP No. MI-ROP-A9831-2012c, Table FGHEATERS-S1, Condition I.19 R 336.1205 R 336.2802 40 CFR 52.21	The Particulate Matter permit limit is 0.0019 lb/MMBTU. The stack test result was 0.0025 lb/MMBTU
FCCU (EU11-FCCU-S1)	General Condition 11(a) of ROP No. MI-ROP-A9831-2012c, Section 1, and Michigan Administrative Rule 301 (R 336.1301)	The FCCU exceeded a 6-minute average of 20% opacity on: 1,256 occasions during October 24, 2018 to October 30, 2018; 54 occasions during November 5, 2018 and;

		108 occasions during November 14, 2018 to November 15, 2018.
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The VN combines separate incidents related to different process units under differing circumstances. The first alleged violation relates to results from the August 15, 2018 particulate matter (PM) stack test on the Coker Heater. The second alleged violation relates to visible emissions from the FCCU stack while the unit was in hot standby during the start-up period following completion of the Fall 2018 maintenance period.

The remainder of this letter provides information requested in the VN, including: (1) the date(s) the alleged violations occurred; (2) an explanation of the causes and duration of the alleged violations; (3) whether the violations are ongoing; (4) a summary of the actions that have been taken and are proposed to be taken to correct the alleged violations and the dates by which these actions will take place; and (5) what steps are being taken to prevent a reoccurrence.

Coker Heater Stack Test

Date the Violation Occurred: The Coker Heater Stack Test was conducted on August 15, 2018. Further, for reasons detailed below, MPC does not believe that the alleged violation occurred prior to or continued beyond the date of the August 15, 2018 stack test.

Explanation of the Causes and Duration of the Violation: The first alleged violation relates to results from the August 15, 2018 particulate matter (PM) stack test on the Coker Heater. Stack testing consisted of three (3) runs, one of which we believe was not valid due to contamination of the sample. Our October 9, 2018 and November 6, 2018 letters to you described the stack test and invalid run. Averaging the results from the two valid runs results in a PM emission rate of 0.00169 lb/MMBTU, which is less than the permit limit of 0.019 lb/MMBTU. When the results from the invalid run are included in an average of the three runs, the PM result exceeds the permitted PM limit. However, the first run was contaminated by a droplet of crude oil or lubricating oil in the front half rinse sample. MPC investigated the potential means for this type of material to enter the stack and concluded that it was not possible for crude oil or lubricating oil to enter the stack based on stack and process configuration. MPC and the stack testing consultant drew the same conclusion—the residue was not a product of combustion, but a contamination of the sample.

Whether the Violation is Ongoing: The alleged violation is not ongoing.

Summary of the Actions Taken: The Coker and Coker Heater were shut down for the Fall 2018 maintenance outage on September 11, 2018, and MPC was unable to schedule a second compliance test before the heater was shut down for the maintenance outage. The Coker and Coker Heater were shut down and not operating from September 11, 2018 to October 25, 2018. The Coker Heater was retested for PM on December 4 - 5, 2018, after completion of the Fall 2018 maintenance outage. Preliminary results indicate that MPC demonstrated compliance with the applicable PM emissions limitations during the testing that occurred December 4 - 5, 2018.

Steps Taken to Prevent a Reoccurrence: While MPC maintains that no actual violation of the Coker Heater's PM limit occurred, MPC does intend to implement the following long-term actions to ensure compliance with the permit-allowable limit and to minimize the chances of contamination in future samples:

1. MPC does require, and will continue to require, the stack testing consultant to clean out the stack testing ports prior to commencing any stack test.
2. MPC does require, and will continue to require, the stack testing consultant to clean and inspect the stack testing apparatus prior to commencing any stack test.

FCCU Regenerator Opacity

Date the Violation Occurred: October 24 – 30, 2018, November 5, 2018 and November 14 – 15, 2018 for the FCCU Opacity.

Explanation of the Causes and Duration of the Violation: AQD alleges three separate instances of violation of the general opacity standard from the FCCU occurring on October 24 – 30, 2018, November 5, 2018 and November 14 – 15, 2018. For reasons detailed below, MPC maintains that the FCCU was operating in compliance with applicable permit limits during these time periods.

The periods of high opacity referenced by the AQD occurred while the FCCU was being operated either in startup or hot standby while waiting for start-up, with feed out of the unit. MPC's Renewable Operating Permit (ROP) requires MPC to operate in accordance with the FCCU's Startup, Shutdown, Malfunction Plan (SSMP) during these periods (EU-FCCU-S1, Condition IX.6). MPC's ROP also requires MPC to operate in accordance with the FCCU's Operation, Maintenance and Monitoring Plan (OMMP) (EU-FCCU-S1, Condition IX.7). The FCCU SSM Plan and the OMMP are approved plans by the MDEQ. The most recent version of the OMMP was submitted to the MDEQ on July 30, 2018. The OMMP references the NESHAP UUU alternative standards as they apply to the FCCU. ROP General Condition #11 provides:

Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part: "a person shall not cause or permit to be discharge into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP." . . .

Michigan Air Rule 301(4) states:

Upon request by the owner of a process or process equipment for which an allowable particulate emission rate is established by R 336.1331, the department may establish an alternate opacity. Such alternate opacity shall not be established by the department unless the department is reasonably convinced of all the following: (a) That the process or process equipment subject to the alternate opacity is in compliance or on a legally enforceable schedule of compliance with the other rules of the department. (b) That compliance with the provisions of subrule (1) of this rule is not technically or economically reasonable. (c)

That reasonable measures to reduce opacity have been implement or will be implemented in accordance with a schedule approved by the department.

The particulate emission limit for the FCCU was established pursuant to R 336.1331(1)(e). (EU-FCCU-S1, Condition VI. 3.). The FCCU is required to comply with all provisions of the federal NSPS at 40 CFR 60 Subparts A and Ja as they apply (EU11-FCCU-S1, Condition IX.1). The FCCU is also required to comply with all provisions of the federal NESHAP at 40 CFR 63 Subparts A and UUU as they apply (EU11-FCCU-S1, Condition IX.5). The NESHAP at 40 CFR Part 63, Subpart UUU includes alternative standards for FCCUs being operated in startup, shutdown and hot standby. Subpart UUU, at 40 CFR 63.1564(a)(5)(ii), allows the FCCU to meet a cyclone exit velocity of > 20 ft/s in lieu of meeting the NSPS J opacity standard or NSPS Ja PM standard, effective August 1, 2018. In accordance with 40 CFR 63.1564(a)(5)(ii), MPC complied with the cyclone exit velocity of > 20 ft/s for the duration of each period AQD alleges MPC was in violation of the opacity standards for the FCCU on October 24 – 30, 2018, November 5, 2018 and November 14 – 15, 2018. During the periods of startup or hot standby, the FCCU was operating in compliance with 40 CFR 63 Subpart UUU. It is not technically feasible to operate the electrostatic precipitators on the FCCU with feed out of the unit. The ROP Renewal Application submitted on February 13, 2017 requested an additional condition to Section III., Process/Operation Restrictions, specifically related to 40 CFR Part 63 Subpart UUU alternate operating requirements during startup, shutdown and hot standby. (See requested condition 2).

Because the FCCU operated in accordance with 40 CFR Part 63 Subpart UUU and the FCCU SSM and OMMP for the periods of alleged instances of violation, the general standard for opacity does not apply. The FCCU was in startup or hot standby and was operating in compliance with alternate opacity limits as allowed by Michigan Air Rule 301(4).

The following is a summary of the alleged instances of violation:

Date of Alleged Violation	Description of Event
October 24, 2018 to October 30, 2018	At approximately 1:47 PM on October 24, 2018, startup procedures were initiated for the FCCU, which was shut down on September 12, 2018 for the Fall 2018 refinery-wide maintenance outage. During startup, the FCCU Regenerator experienced 7590 minutes of intermittent spikes in opacity between 1:47 PM October 24, 2018 and 9:53 AM October 30, 2018. During this time period the FCCU was operated in compliance with the alternative limits applicable to periods of startup and shutdown contained in 40 CFR Part 63, Subpart UUU, specifically, 63.1564(a)(5)(ii). See attachment.
November 5, 2018	On November 5, 2018, at 2:08 PM an upset occurred in the FCCU. An instrument on the FCCU was not reading correctly, and when MPC personnel attempted to restore functionality the safety interlock system engaged and shut down the unit. In response to the upset, the FCC Regenerator was put on hot standby from 2:36 PM until 4:33 PM. The

	<p>FCCU was started up at 4:30 PM and the FCC Regenerator was started up per the Startup Shutdown and General Duty Plan (SSMGD) and associated procedures. The ESPs were started up when the unit was stable.</p> <p>The FCCU Regenerator experienced 324 minutes of intermittent spikes in opacity between 2:11 PM November 5, 2018 and 7:53 PM on November 5, 2018.</p> <p>While the FCCU was in hot standby and during the later startup, MPC operated the FCCU in compliance with the alternative limits applicable to periods of startup, shutdown and hot standby contained in 40 CFR Part 63, Subpart UUU, specifically, 63.1564(a)(5)(ii). See attachment.</p>
<p>November 14, 2018 to November 15, 2018</p>	<p>On November 14, 2018, at approximately 9:50 PM an upset occurred in the FCCU. MPC determined that moisture in a valve actuator caused an instrument malfunction, which in turn caused an unplanned shutdown of the FCCU. In response to the upset, the FCCU Regenerator was put into hot standby at approximately 9:50 PM on November 14, 2018 until 10:00 AM on November 15, 2018. MPC commenced startup of the FCCU at 10:50 PM on November 14, but the continued presence of moisture in the valve prevented a successful startup. MPC took apart and removed water from lines connected to the malfunctioning valve. MPC also checked all low point bleeders in the instrument air system to ensure that no water remained in the system. The FCCU was started up November 15, 2018 at 8:36 AM and the FCC Regenerator was started up per the Startup Shutdown and General Duty Plan (SSMGD) and associated procedures. The ESPs were started up when the unit was stable.</p> <p>The FCCU Regenerator experienced 648 minutes of intermittent spikes in opacity between 9:53 PM November 14, 2018 through 10:29 AM on November 15, 2018.</p> <p>While the FCCU was in hot standby and during startup, MPC operated the FCCU in compliance with the alternative limits applicable to periods of startup, shutdown and hot standby contained in 40 CFR Part 63, Subpart UUU, specifically, 63.1564(a)(5)(ii). See attachment.</p>

Whether the Violation is Ongoing: The alleged violation is not ongoing.

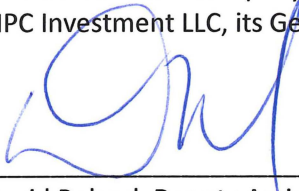
Summary of the Actions Taken: While the FCCU was in hot standby and during startup, MPC operated the FCCU in compliance with the SSMP and OMMP and the alternative limits applicable to periods of startup, shutdown and hot standby contained in 40 CFR Part 63, Subpart UUU, specifically, 40 CFR 63.1564(a)(5)(ii). MPC will continue to operate the FCCU in compliance with the alternative limits in 40 CFR Part 63, Subpart UUU during periods of startup, shutdown, and hot standby.

Steps Taken to Prevent a Reoccurrence: MPC maintains that there was no violation of the opacity standard. MPC will continue to operate the FCCU in compliance with the SSMP and OMMP and the alternative limits applicable to periods of startup, shutdown and hot standby contained in 40 CFR Part 63, Subpart UUU, specifically, 40 CFR 63.1564(a)(5)(ii).

MPC appreciates this opportunity to respond to the VN. If you would like further information, please do not hesitate to contact Honor Sheard at 313-297-6248.

Sincerely,

Marathon Petroleum Company LP
By: MPC Investment LLC, its General Partner



Mr. David Roland, Deputy Assistant Secretary

cc: Mr. Paul Max, City of Detroit, BSEED
Ms. Mary Ann Dolehanty, DEQ
Dr. Eduardo Olaguer, DEQ
Mr. Christopher Ethridge, DEQ
Ms. Jenine Camilleri, DEQ
Ms. Wilhemina McLemore, DEQ
Mr. Jeff Korniski, DEQ

Attachments: Cyclone exit velocity data for October 24 – 25, 2018
Cyclone exit velocity data for November 5, 2018
Cyclone exit velocity data for November 14 – 15, 2018
Renewable Operating Permit Report Certification