Michigan Refining Division

Marathon Petroleum Company LP

1300 South Fort Street Detroit, MI 48217 Tel: 313.843.9100

Via Federal Express

August 21, 2015

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

RECEIVED AUG 2 4 2015 Air Quality Division Detroit Office

RE: Second Response Letter as Follow-up to the May 29, 2015 Violation Notice Issued to Marathon Petroleum Company LP, Michigan Refining Division

Dear Mr. Acevedo:

On May 9-10, 2015 Marathon Petroleum Company LP (MPC), Michigan Refining Division (MRD) experienced a unit upset at the Fluidized Catalytic Cracking Unit (FCC) that eventually led to the unit's unplanned shutdown. The FCC upset and shutdown resulted in flaring, excess smoking of the flare, and a Rule 912 emissions exceedence. On May 29, 2015, the Michigan Department of Environmental Quality, Air Quality Division (AQD), issued a Violation Notice (VN) for the incident. Subsequently, MRD responded in writing to the VN on June 18, 2015. AQD contacted MRD with questions regarding the June 18, 2015 response letter. This letter is a second response which provides additional detail and documents corrective actions related to the May 9-10 incident.

MRD's flares comply with requirements of the Consent Decree that MPC executed with the United States Environmental Protection Agency and which became effective on August 30, 2012 (United States District Court of the Eastern District of Michigan, Civil Action No. 2:12-cv-11544-DML-MJH) ("Consent Decree"). Compliance with the Consent Decree requirements, including operation of an automatic control system on the flares, helps ensure good combustion efficiency in the flares by minimizing steam injection. Note that during the May 9-10 upset, shutdown and start-up, all Consent Decree-required combustion efficiency parameters were within compliance limits; this included NHVcz, MFR, and S/VG. Compliance data are attached to this letter. It should also be noted that no ambient air quality impact was detected as a result of the incident (as indicated by Perimeter Air Monitoring Station data, which are attached to this letter).

As noted in our initial response letter, the amount of material being relieved to the CP flare during the May 9-10 incident exceeded its rated smokeless capacity. As a long-term fix, MRD intends to re-route streams that are currently being directed to the CP flare to the Coker flare and increase the flare gas recovery capacity of the Coker flare by the end of 2018. Note that the Coker flare has a significantly higher smokeless capacity than the CP flare. However, until a plant shutdown takes place to complete this re-route, MRD has implemented or intends to implement the following <u>corrective actions</u> which were developed in order to prevent upsets or unplanned shutdowns of the FCC and/or Gas Con Units that could result in excess opacity or flare smoking. These corrective actions are primarily focused on improving gasoline stripper/debutanizer operation and control.



<u>Tower Equipment Improvements</u>: The debutanizer hot vapor bypass control valve (12PC0261A) was found to be leaking through and has been repaired. The debutanizer reboiler control valves (slurry) were found to be leaking through, which prevents accurate control of the tower heat input. These control valves were repaired. The debutanizer tower overhead condensers were taken off-line and cleaned, which significantly improved heat transfer and, as a result, overall tower control. These condensers are now back-washed on a monthly basis. Lastly, an evaluation of the current available spare parts vs. equipment in slurry service will be completed by August 31, 2015.

<u>Tower Instrumentation:</u> New pressure instrumentation has been added to both the gasoline stripper and debutanizer. The debutanizer tower reflux flow indication was repaired and a reflux temperature indication was added, allowing more precise operational control. Modifications were made to the debutanizer tower overhead control logic to de-couple the tower and overhead receiver pressure controls. A review of current Safety Instrumented System (SIS) testing intervals will be completed by August 31, 2015.

<u>Operational/Training Improvements:</u> Unit temperature adjustments were made in the gasoline stripper and associated equipment to help prevent flooding. Tower scans were completed, which aided in identifying potential flooding and entrainment conditions. A non-condensable venting system was commissioned on the debutanizer overhead. Operator radio communication refresher training was conducted with an emphasis on repeat-back in order to prevent communication failures. New and/or modified procedures and troubleshooting (TS) guides have been developed in order to prevent and minimize the effects of units upsets. These include "Gasoline Stripper TS Control Guideline", "Steps to Escape Stripper Absorber Recycle", and "Debutanizer TS Control Guidelines".

MRD is committed to preventing flare smoking and appreciates this opportunity to further respond to the VN. If you have questions concerning this submittal or would like additional information please contact Ian Ladomer at (313) 297-6336 or at iwladomer@marathonpetroleum.com.

Sincerely,

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

David T. Roland, Deputy Assistant Secretary

cc: Ms. LaReina Wheeler, City of Detroit, Department of Environmental Affairs Ms. Lynn Fielder, DEQ Ms. Mary Ann Dolehanty, DEQ Ms. Teresa Seidel, DEQ Mr. Thomas Hess, DEQ Ms. Wilhemina McLemore, DEQ Mr. Jeff Korniski, DEQ Mr. Todd Zynda, DEQ

Attachments:

Renewable Operating Permit Report Certification Attachment A, CP flare combustion efficiency data for 5/9-10 Attachment B, PAMS data for 5/9-10