Air Monitoring Plan

Date: Update - February 4, 2019

To: Brian Kelly, EPA and Dave Bell, BSEED

From: Honor Sheard

RE: Community Air Monitoring Plan – Version 2

Background

On 2/2/19 Marathon Petroleum Company (MPC) Michigan Refining Division discovered a leak in the Coker Flare. This was allowing some amount of natural gas and refinery gas containing hydrogen sulfide and mercaptans to go uncombusted. Community air monitoring was conducted starting around 2/2/19 at approximately 1 pm. Below is a plan for community air monitoring until the problem can be resolved.

Path Forward: Perimeter Air Monitors

MPC maintains four perimeter air monitors (PAMS) around the refinery. The PAMS collect data continuously and report hourly averages for particulate matter, TRS, CO and SO2. The TRS analyzer measures hydrogen sulfide, methyl mercaptan, dimethyl sulfide and methyl-disulfide. MPC will relay this data every four hours during the event to BSEED, MDEQ and EPA.

Path Forward: Community Air Monitoring

Marathon will have at least two air monitoring teams during the duration of the event. We will try to maintain monitoring for 15 minutes every hour in the downwind community, there might be a brief lag during shift changes. The teams will use a combination of Area Raes and Multi Raes to monitor for H2S, VOC, O2 and LEL. Other sensors such as SO2, CO or NH3 maybe used periodically based on the device being used.

Should the refinery notice VOCs above 0.5 ppm we will conduct benzene readings using an UltraRae 3000.

Should the refinery identify measurements above 1ppm H2S, 0.5 ppm VOC, or 1%LEL the refinery will make notification via email at that time to BSEED, MDEQ and EPA. Should those concentrations be sustained for thirty minutes the refinery will provide telephone notification to BSEED-Paul Max at (313) 910-8781; EPA-Brian Kelly (734) 692-7684; MDEQ-Jorge Acevedo (313) 456-4679 or PEAS (800) 292-4706.

The refinery currently has two available summa canisters for additional air monitoring as needed. We are trying to obtain more.

Additional Sampling

On 2/2/19, MPC took four grab summa canister samples at the following locations between 17:40-18:13 West Plant Entrance (upwind); Riverside & Ferney (downwind); Woodmere & Avis (downwind). An additional summa canister was taken at 20:15 at Ormond & Heidt (downwind). Those will be sent Monday for the soonest available data analysis.

On 2/2/19, the MPC PAMS had summa canisters samples collected over a 24 hour period from 2/2/19 00:00 through 2/3/19 00:00. MPC has requested the third-party vendor to send the four canisters out for analysis as soon as they can.

On 2/3/19, MPC placed charcoal badges in the downwind community for an approximate 10-hour sample collection period. These will provide additional VOC data. They will be sent out Monday for the soonest available data analysis.

Data will be made available to BSEED, MDEQ and EPA as soon as it is available.

End of Sampling

MPC will continue to maintain this sampling plan for at least four hours after the refinery flare has been isolated from the process.

Startup Sampling

MPC will send a daily PAMS report from the time the flare has been isolated until the end of the refinery start-up. This will be sent to BSEED, MDEQ and EPA. MPC will restart the downwind Community Air Monitoring sampling plan (as outlined above) during the first 24 hours the flare is relit and then again for the first 24 hours that oil is reintroduced to process units.

Sampling Results

Sampling results will be summarized and attached to an Air Monitoring Report that will be periodically updated with new data to BSEED, MDEQ and EPA.