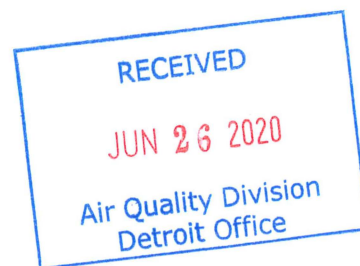


EES Coke Battery L.L.C.

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June 24, 2020

Ms. Katie Koster
Air Quality Division, EGLE
Cadillac Place
3058 West Grand Boulevard
Suite 2-300
Detroit, MI 48202

Re: EES Coke Battery, L.L.C. Response to Department of Environment, Great Lakes and Energy Violation Notice, dated June 1, 2020; PTI No. 51-08C; ROP No. 199600132d.

Dear Ms. Koster,

EES Coke Battery, L.L.C. (EES Coke) is in receipt of a Violation Notice (VN) issued by the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) on June 1, 2020 and received by EES Coke on June 2, 2020. Pursuant to electronic mail correspondence on June 3, 2020 between AQD and EES Coke, the parties confirmed that EES Coke's response should be submitted to EGLE by June 24, 2020. The VN is based upon EGLE's review of the Title V deviation reports submitted by EES Coke for the periods of July through December 2018, January through June 2019, and July through December 2019. The VN alleges that on multiple dates within these periods, EES Coke was not in compliance with the following limits:

1. Instantaneous opacity limit of 20% for fugitive visible emissions during push/travel operations (PTI 51-08C, EUCKE-BATTERY, Special Condition I.25);
2. Visible emissions from each of the overpressure bleeder flares over 5 minutes during any two consecutive hours (PTI 51-08C FGMACTL, Special Condition II.10); and
3. Opacity from each of the overpressure bleeder flares exceeded 20% per 6-minute average, except for one 6-minute average per hour of not more than 27% opacity.

Throughout this response EES Coke refers to the 8 bleeders included in the ROP under EUBLEEDERS, as "overpressure bleeders", as opposed to "bypass/bleeders", which is the term used in the VN. The term "overpressure" is more consistent with the purpose and nature of the bleeders. The bleeders only operate as an emergency measure when there is a potential for a dangerous build-up of gas and pressure at the coke battery due to power and steam losses. EES Coke's response to each of the alleged violations is set forth below:

Item 1: Instantaneous Opacity Limit for Fugitive Visible Emissions During Push/Travel Operations

EES Coke previously reported 64 occurrences, over 46 daily observations in its Title V deviation reports submitted for the periods of July 2018 through December 2019. In March 2019 EES Coke performed further investigation of the coke battery's push travel operations to determine the root cause of the exceedances and found that they were related to blockages identified in flex

hoses used to supply gas to each heating wall burner. Based on the March 2019 root cause analysis and previous investigations of the coke battery's push travel operations, EES Coke also surmised that many previously observed causes such as, low wall span temperatures, fuel / air ratio, and needing to increase COG gas flow were actually symptomatic of the flex hose blockages. There are 2,752 flex hoses located throughout the coke battery. Prior to the March 2019 root cause analysis, EES Coke thought that the preventive maintenance of swabbing the gas cocks and punching the risers was also removing any build up in the flex hoses, but EES Coke later found that build-up was still occurring. Historically, flex hoses were replaced only as necessary. However, based on the March 2019 root cause analysis and review of previous information, EES Coke prioritized the investigation and replacement of flex hoses based on: (i) those ovens that previously had visible emissions of a push travel that were a deviation from the ROP; (ii) the age of the flex hose; and (iii) visible build-up of material upon inspection. All flex hoses were inspected as part of this review and all hoses that were deemed in need of replacement, were replaced beginning in April 2019. EES Coke completed the flex hose inspection and replacement in October 2019 and continues to spot check and replace flex hoses, as needed.

EES Coke's continued inspection and replacement of the flex hoses has minimized the possibility of a reoccurrence of exceedances of the instantaneous visible opacity limit. In addition, EES Coke is finalizing a Standard Work Instruction (SWI) that will address the continued inspection and replacement of the flex hoses. EES Coke has not observed excess visible emissions during push/travel operations since completing the flex hose replacements described above.

Item 2: Visible Emissions from Overpressure Bleeder Flares Greater than 5 Minutes for Each Bleeder During Any Two Consecutive Hours

First, EES Coke does not agree with EGLE's assessment that noncompliance with the visible emissions standard at an individual overpressure bleeder should be considered a separate violation of the standard at each of the eight overpressure bleeders. EGLE should exercise discretion and treat each continuous violation that lasts longer than 2 hours as a single violation for this emission unit. With respect to each visible emission event at an overpressure bleeder between July 2018 and December 2019, there was one root cause and common set of circumstances that caused the visible emissions on that day. As such, EES Coke asserts that there were only 17 discrete bleeder events that occurred between July 2018 and December 2019 that did not comply with the applicable NESHAP standard and a significant portion of those events occurred during the polar vortex, as explained below. All of these events were also reported in EES Coke's deviation reports for these periods.

Approximately 80 percent of the overpressure bleeder events during the timeframe from July 2018 through December 2019 were managed within compliance requirements for visible emissions. The remaining 17 overpressure bleeder events that did not meet the visible emissions requirements were largely due to losses of power and steam at United States Steel Corporation - Great Lakes Works (USS). When USS loses power and steam it directly impacts the coke battery and requires the operation of the overpressure bleeders as an emergency response measure. EES Coke documented that downtime at USS between July 2018 and December 2019, ranged from ½ hour to 1 ½ days, with the average event lasting approximately 7 hours. A significant portion of this downtime also coincides with the polar vortex that occurred between January 30, 2019 to February 3, 2019. During the polar vortex, loss of power and steam was often longer than 2 hours (i.e. during this time USS was down for 1 ½ days and experienced prolonged rolling power and steam losses); therefore, it was

impossible for EES Coke to limit visible emissions from the overpressure bleeders to the 2-hour NESHAP standard.

As noted above, and EES Coke cannot emphasize enough, overpressure bleeder events are an emergency measure to respond to power and steam losses within the system and are imperative to the overall safe and reliable operation of the coke battery. These events often occur on a sudden and unexpected basis and are specifically designed to protect workers, neighbors, and the environment by relieving any unsafe gas and pressure buildup in the coke battery. While EES Coke has taken steps to reduce the frequency of overpressure bleeder events by modifying processes and equipment at the coke battery and the byproducts plant (e.g., recent work done on the primary cooler), overpressure bleeder events are still necessary and critical to the safe operation of the facility.

In early 2020, USS ceased operation. Starting on June 15, 2020, EES Coke took over operating the USS Boiler House #2 (BH2) boilers and electrical rooms throughout Zug Island. EES Coke will continue to operate BH2 and the electrical rooms as they are critical for EES Coke to continue to operate. Since USS is no longer operating, EES Coke will have more capacity than it needs and more redundancy in the event of an equipment malfunction (BH2 is currently only operating 3 of the 5 boilers at lower loads). Due to these circumstances, EES Coke anticipates that operation of the overpressure bleeders will be necessary less often and therefore, the occurrence of visible emissions from the overpressure bleeder flares will also be less frequent.

Item 3: Overpressure Bleeder Flare Stacks Opacity Limits, General Condition 11

As EES Coke reported in its semi-annual ROP reports, the visible emissions from the overpressure bleeder flare stacks exceeded the 6-minute average opacity limit of 20 percent and one 6-minute average per hour of not more than 27 percent between July 2018 and December 2019. Of the events that EES Coke reported in its semi-annual ROP reports, only 3 were based on Method 9 readings. As explained in more detail below, EES Coke would like to request a meeting with EGLE to discuss this item and determine a reasonable approach to measure opacity from the overpressure bleeders and determine compliance.

Between July 2018 and December 2019, EES Coke recorded three 6-minute average opacity readings using Method 9. The results were: 29.8 percent opacity, observed on August 17, 2018; 41.3 percent opacity, observed on January 31, 2019; and 15 percent opacity, observed on November 8, 2019. The other events EES Coke reported in its semi-annual ROP reports were based on overpressure bleeder events and opacity calculations that were based on an adaptation of the following approach suggested by EGLE.

EGLE suggested that EES Coke should assume that opacity is 100 percent when an overpressure bleeder is activated and therefore, the 6-minute average opacity limit will be exceeded within the first 90 seconds of operation. As explained below, EES Coke believes that this conservative assumption produces inaccurate results, but EES Coke understood that it could apply this approach using real data from its Method 9 readings once it was available.

In February 2017, EES Coke and EGLE met to discuss General Condition 11 and EES Coke stated its concerns with using the assumption that opacity is 100 percent at the time the overpressure bleeders are activated and continues to be 100 percent throughout the first 90 seconds of operation. EGLE and EES Coke discussed that General Condition 11 requires Method 9 readings to truly assess

compliance. EES Coke also raised practical concerns about completing the Method 9 readings, due to the fact that the overpressure bleeders are operated during emergencies. Therefore, the operation of the bleeders would not necessarily occur when the Method 9 reader was on-site, during daylight hours, available to conduct a Method 9 reading (e.g., not in the middle of a Method 303 reading), and able to position properly to complete a 2-hour Method 9 reading on 1 of the 8 overpressure bleeder flares. However, EES Coke agreed to attempt to complete Method 9 readings of the overpressure bleeders in order to collect accurate data to assess compliance. EES Coke was able to conduct 3 Method 9 readings of the overpressure bleeders between February 2017 and December 2019.

When a Method 9 reading could not be completed EES Coke adapted EGLE's suggested approach above, by using the average opacity from the 6-minute average opacity reading from the most recent Method 9 reading(s). This approach allowed EES Coke to incorporate real data into its calculations without making an assumption that opacity is 100 percent when the overpressure bleeder is activated. EES Coke based its approach on real time data that it was collecting that showed opacity was far less than 100 percent when the overpressure bleeders are activated. For example, the August 17, 2018 Method 9 reading was completed during a prolonged power loss at USS, when it was necessary to operate the bleeders for several hours. During this time, instantaneous opacity readings were collected, as well as 6-minute average opacity readings. The highest instantaneous opacity reading was 60 percent. Significantly less than 100 percent. The highest instantaneous opacity readings during the January 2019 and November 2019 events, were 55 percent and 50 percent respectively. Again, significantly less than 100 percent. EES Coke used this approach to complete its deviation reports between July 2018 and December 2019.

An additional cause of the deviations reported by EES Coke between July 2018 and December 2019, was the power and steam losses from USS. EES Coke documented that downtime at USS ranged from ½ hour to 1 ½ days, with the average event lasting approximately 7 hours. The loss of power and steam accounted for over 95 percent of the reported opacity exceedances. In addition, the polar vortex that occurred from January 30, 2019 through February 3, 2019 greatly affected the situation and about half of the instances when EES Coke reported that the 6-minute average opacity limit was exceeded, were on these days.

Finally, as explained above under Item 2, EES Coke began operating BH2 on June 15, 2020. Since USS is no longer operating, EES Coke will have more capacity than it needs and more redundancy in the event of an equipment malfunction. Due to these circumstances, EES Coke anticipates that operation of the bleeders will be necessary less often and therefore, the occurrence of visible emissions from the overpressure bleeders will also be less frequent.

Ms. Katie Koster
June 24, 2020

Please contact me at (734) 320-5255 if you have questions regarding this submittal or would like to discuss any of these responses in more detail. I will also contact you during the week of July 6th, to schedule a meeting to discuss General Condition 11 and opacity from the overpressure bleeders.

Sincerely,



Brenna Harden
Senior Environmental Engineer
EES Coke Battery, LLC

CC: Jenine Camillari, EGLE Enforcement Unit Supervisor
Todd Richards, DTE Energy Resources
Fadi Mourad, DTE Energy
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