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FEB - 3 2023

Air Quality Division Detroit Office

DTE VANTAGE

February 1, 2023

Katie Koster Air Quality Division, EGLE Cadillac Place 3058 West Grand Boulevard Detroit, MI 48202

Re: Response to January 11, 2023 Violation Notice EES Coke Battery, L.L.C., River Rouge, Michigan Renewable Operating Permit No. 199600132 (SRN: P0408)

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). The VN, dated January 11, 2023, alleges that stack testing results for EES Coke's Pushing Emission Control System (PECS) baghouse performed in September 2022 did not meet the permit limits for fine particulates (PM10) (0.69 pound per hour) established under PTI No. 51-08C. The value as listed in the VN was alleged to be 0.82 pound PM10 per hour basis. However, the value as listed in the stack test report was 0.77 pound PM10 per hour.

Concerning the September 2018 PECS stack test, upon receiving the draft test results EES Coke immediately initiated an investigation and attempted to schedule a re-test as soon as practicable. Initially, concerns focused on the outlier of Run 1. As EGLE was aware at the time of the stack test and identified in the stack test report, stack testing was allowed to occur around a planned battery downtime. On the surface, this should be of minimal concern as the PECS Baghouse is operated only during a Push to empty the metallurgical coke contents from an oven within the Battery. This delayed stack testing and the stack test crew was on hold for a good portion of the day while they completed quality control checks to be ready once production resumed. However, not long after beginning the run, severe weather hit the area. Due to safety policies, CleanAir Engineering (CAE) personnel vacated the stack platform to seek shelter during the thunderstorm that included detected lightning strikes within a 5-mile radius. Policy would not allow stack testing to resume until no detected lightning strikes within 5-miles and remained on stand-by in an effort to resume testing. Unfortunately, lightning strikes continued, and the forecast showed a persistent stormfront was anticipated throughout the evening until early morning. CAE waited until there was a gap in the storms to safely secure testing equipment on the test platform, but determined they had to leave the site at 22:30. CAE returned to the site on September 21, but was not able to resume Run 1 until the scheduled outage was complete (anticipated to be around 17:15). CAE did perform a leak check on the sample train before resuming Run 1 at 17:45 and technically completed the run within the EGLE 36-hour window allowable.

As explained in the stack test report on page 3, "EES demonstrated compliance within their permit limits for all parameters except PM10. There is reason to believe that the extended delay in testing during Run 1 played a factor in the higher reported PM results. Both filterable particulate matter (FPM) and condensable particulate matter (CPM) results were significantly higher during Run 1. If Run 1 PM10 numbers fell within the range of Runs 2 and 3, EES permit limits would have been met."

When reviewing NESHAP-required operating parameters of the PECS Baghouse (as previously submitted to EGLE in the stack test report under Appendix I), the PECS Baghouse was within appropriate operating ranges for fan amps as well as pressure drop at the time of the stack test.

The PECS Baghouse re-test for particulate matter was requested to be completed the week of November 28, 2022, when the September 2022 stack test results were submitted to EGLE. The September 2022 stack test report was submitted on November 2, 2022 (earlier than the required report submittal date.) EES Coke prioritized demonstrating compliance as quickly as possible.

EES Coke recently submitted the November/December 2022 stack test report (January 24, 2022) which demonstrated compliance for all PM permit limits, including PM10 on a pound per hour basis at a value of 0.64.

ELGE had some questions regarding PECS Baghouse operation such as PECS Baghouse alarms, PECS Baghouse maintenance activities as well as operational parameters such as fan amps and pressure drop across the PECS Baghouse. EES Coke responded to the email request on December 13, 2022, highlighting EES activities. No further discussion regarding the response had been received at the time of this response. The crux of the email focused on the fan amps and pressure drops being within expected values per the Malfunction Abatement Plans. Secondly, the PECS Baghouse alarms addressed as such:

"It was determined that the root cause of these nuisance alarms were due to a seal on the isolation valve of specific baghouse cells. Yes, in general, when an alarm occurs, the battery foreman or designee will attempt a preliminary assessment of the alarm condition with someone going to the unit to determine if there are any emissions or obvious faults (e.g., backup up solids accumulation.) If there is nothing obvious and no visible emissions from the stack, they will acknowledge the alarm and typically request corrective maintenance by inputting a MAXIMO work order. This would be documented in the battery daily report. However, in the timeframe that you noted, the seal on the isolation valve required extended production downtimes to resolve. Although operations would observe current conditions and acknowledge alarms, the repair had no observed impact on the emissions and would just be slow to seal closed resulting in nuisance alarms. The first repair for Cell 1 was completed during the May 2022 planned outage. Later it was determined that an additional cell (No 4) also required corrective maintenance. This was completed in the September 2022 planned outage. Alarms have drastically reduced since the last corrective maintenance."

Another item EES has considered to avoid is completing PECS Baghouse stack testing during planned outages. Although theoretically stack testing can work around such activities, delays can incorporate a layer of uncertainty that can be avoided. No additional maintenance was completed between stack testing events, which further leads EES to conclude that the extended stack test delay on Run 1 of the September 2022 stack test adversely affected PM results. EES feels compliance was possible outside of Run 1 and confirmed during the November/December stack test.

Lastly, extended run times where large-scale delays due to weather, production and/or mandatory rest times for stack test crews, are uncertainties that while considered possibly acceptable, due to additional control measures such as 36-hour windows or additional leak checks, should be avoided. Looking back, EES could have avoided the issues considering this stack test proves data collected not indicative of operation and disqualify the run. There was plenty of justification to disqualify the run and then proceed on September 21 with Run 2, Run 3 on the next day and Run 4 on that Friday. EES will add that to discussions for future stack tests.

Please contact Brenna Harden at 734.320.5255 should you have any further questions.

Sincerely,

M. Krchmar Plant Manger

EES Coke Battery, L.L.C.

Cc:

J. Camilleri, EGLE Fadi Mourad, DTE Energy R. Sanch, DTE Vantage B. Harden, EES Coke L. Harris, EES Coke