

EES Coke Battery, LLC

P.O. Box 18309
River Rouge, MI 48218
Office: (313) 297-4189
Fax: (313) 297-4184



February 10, 2016

Katie Koster
Senior Environmental Engineer
MDEQ - Air Quality Division
Cadillac Place
3058 West Grand Boulevard, Suite 2-300
Detroit, MI 48202-6058

RE: Followup to October 29, 2015 Violation Notice

Dear Ms. Koster:

EES Coke Battery, LLC (EES Coke) received a Violation Notice (VN) issued by the Michigan Department of Environmental Quality (MDEQ), Air Quality Division (AQD). The VN, dated October 29, 2015 alleges that EES Coke improperly vented coke oven emissions (i.e., without flaring control) and exceeded the allowed visible emission standard for coke oven emissions when flared. On January 29, 2016, EES Coke received an email requesting follow up on the Bypass Bleeder Flaring.

EES has completed and continues to look for opportunities to improve the reliable operation of the Bypass Bleeder Flares that minimizes visible emissions. The following summarizes activities that have been previously reported as well as any updates since the last communication.

- A. Auto Ignition Tubes & Igniters: As part of the February 17, 2015 event, investigation determined that the root cause was based on two items: plugged ignition tube and the gap on the igniter was too great. As a result of the identified root cause of Bleeder 3B, ESS proceeded to systematically review / clean / repair all ignition tubes and igniters for all bypass bleeder flares. All auto ignition tubes were cleaned and igniters were procured and replaced in May 2015. All auto ignition tubes and igniters are functioning. The result of an after action review of the incident, yielded that the last time the igniter tubes were changed was four years ago. The recommended preventive maintenance of the igniter tubes would be increased to 3 years. As a result, the preventive maintenance was modified to reflect this frequency change and is attached for your information.
- B. Standard Operating Procedure for Bleeder Maintenance: As part of the April 9, 2015 event, the root cause of the bleeder malfunction was a power cell that was installed on April 3 and drained by April 9. The new power cell was tested during installation and was determined to be good for use. Unfortunately, before the next scheduled bleeder test, the new power cell had shorted and failed. The previous version of the SOP verified

bleeder operation weekly, which would have occurred on April 10. It was determined that this critical verification should be completed daily. This change to daily commenced on April 16, 2015 and is documented on the Heater Shift Status Report.

- C. Thermography of Flushing Liquor Lines to Bleeder: As part of the May 12, 2015 event, the root cause of the bleeder malfunction was a partially plugged flushing liquor line to Bleeder 4A. Previously, thermography of these lines was completed on a quarterly basis. If heat is depicted in the imagery, then the line is flowing as expected. If the image is faint or absent in the thermography, the flow of flushing liquor is limited or absent and will not quickly replenish the flushing liquor seal to the bleeder damper pan after the bleeder is activated. It was determined that thermography frequency will be increased from quarterly to weekly to more quickly identify and mitigate poor flows in flushing liquor lines. This increased inspection frequency began on June 4, 2015.
- D. Electrical Signal Supply to Bleeders: As part of the August 8, 2015 event, it was determined that primary and backup electrical cables were in separate conduit but located near each other. The root cause of the bleeder malfunction was that both suffered damage due to heat / short circuiting. A temporary cable was installed later on August 8, 2015. Primary and backup cables were permanently replaced on August 28, 2015. The backup cable was relocated to provide separation from the primary cable. Additionally, EES installed a green light on crossover #1 in September 2015 to signal that the bleeder ignition system is communicating properly. The Daily Bleeder Maintenance Standard Operating Procedure was amended to require this observation and to contact a technician immediately if the green light is not lit.
- E. Position of the Bleeder Igniter Switches: As part of the October 19, 2015 event, the root cause was determined that the Heater failed to place the bleeder igniter switch back to AUTO after the daily bleeder verification activity occurred. Two corrective actions were identified to reduce the potential for human error. The Daily Bleeder Maintenance Standard Operating Procedure was modified to require Heaters to observe the bleeder igniter position on the operating console is in the AUTO position every day at the beginning of their shift. The Standard Operating Procedure states that if the Heater observes the bleeder igniter is in manual mode, the Heater is to go to the Battery Top to find out why and mitigate immediately. Additionally, EES investigated if the bleeder igniter switch could be changed to a "sling back" type. This switch would allow operators to complete the daily verification by physically moving the switch to the MAN position. The benefit is that once the verification is complete, the switch will move back into the AUTO position. EES investigated and purchased switches to make this change. The change to the "sling back" style was completed for Bleeders 1A & 1B on February 3, 2016 and Bleeders 2A & 2B on February 8, 2016. Remaining bleeder igniter switches will be replaced by February 29, 2016.
- F. Reduction in Frequency / Duration of Bleeder Events: The Standard Operating Procedure was reviewed and optimized to reduce suction loss when completing an Exhauster change in the Byproducts Plant. Since the Standard Operating Procedure was implemented, bleed events as a result of exhauster changes reduced from over 5 minutes

to less than 30 seconds per event. Training on the modified Standard Operating Procedure was completed on December 17, 2015.

- G. Reduction in Frequency / Duration of Bleeder Events: EES has networked with outside consultants to provide alternative operational practices regarding the Primary Cooler in an effort to reduce the frequency and duration of the heat up events. EES has tested some of these suggestions is continuing to evaluate the effectiveness of these changes.
- H. Alternative to Existing Auto-Igniters: Existing auto-igniters were repaired in May 2015. Existing auto-igniters were provided by a company that no longer provides parts or support resulting in custom-fabrication of parts. A quote was received to replace the auto-igniters where spare parts and support are readily available. We are waiting on two other competitive quotes before a decision can be made. Additionally, EES has solicited several vendors to review the bypass bleeder flaring system. EES identified only one vendor willing to evaluate and provide suggestions for the bypass bleeder flares regarding continuous pilot options and if it is viable at this location.

A copy of the updated Standard Operating Procedures, Maintenance Job Plan, and training sheets have been attached for your records as requested in No 2 of your additional information request. Modifications to the SOPs are highlighted in yellow.

Item A, identifies that all repairs to the auto-ignition system were completed as requested in No 3 of your additional information request.

Item H provides an update regarding our progress determining an alternative to the existing auto-igniters installed at EES as requested in No 4 of your additional information request.

EES has not suffered from an auto ignition system failure of the bleeders due to equipment since August 8, 2015, which was addressed in Item D. The failure on October 19, 2015 was human error and was addressed in Item E. If you have any questions, please feel free to call me at 313.216.2535.

Sincerely,



Brenna Harden
Environmental Engineer

cc: Mina McLemore, MDEQ-AQD
Fadi Mourad, DTE
M. Krehmar, DTE EES

Todd Richards, DTEES
Steve Zervas, DTEES
R. Carlin, DTE EES