

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

**FCE Summary Report**

<b>Facility :</b> EES COKE BATTERY L.L.C.	<b>SRN :</b> P0408
<b>Location :</b> 1400 Zug Island Road	<b>District :</b> Detroit
	<b>County :</b> WAYNE
<b>City :</b> RIVER ROUGE <b>State:</b> MI <b>Zip Code :</b> 48209	<b>Compliance Status :</b> Non Compliance
<b>Source Class :</b> MEGASITE	<b>Staff :</b> Katherine Koster
<b>FCE Begin Date :</b> 08/27/2019	<b>FCE Completion Date :</b> 8/27/2020
<b>Comments :</b> At this time, non compliance was chosen based on the annual inspection. A violation notice is pending for excess SO2 emissions and it is unknown whether the visible emissions exceedances from the overpressure stacks have been resolved.	

**List of Partial Compliance Evaluations :**

Activity Date	Activity Type	Compliance Status	Comments
08/27/2020	On-site Inspection	Non Compliance	FY2020 Scheduled Inspection

Activity Date	Activity Type	Compliance Status	Comments
07/13/2020	NESHAP (Part 61)	Compliance	<p>Quarterly and semi-annual LDAR monitoring ("Benzene Monitoring Report") to comply with Part 61 Subparts L and V was received on January 30, 2020. Semi-annual monitoring is performed on the gas blanketing system of Loop "D" and quarterly and semi-annual monitoring for equipment leaks. Report states that two quarterly equipment leak monitoring, one semi-annual equipment leak monitoring, and one semi-annual gas blanketing monitoring was performed by Sidock Group, Inc. This is the final monitoring for Tank #38 as a light oil tank. Tank 37 was put into service in late September 2018 and is the only tank receiving light oil product from the Byproducts operations.</p> <p>Equipment leaks are defined as 10,000 ppm above background while the gas blanketing system is subject to a limit of 500 ppm above background. Report indicated that no equipment tested exceeded the 10,000 ppm leak threshold. One leak of a valve and one leak of a flange were detected in November 2019. No leaks were detected at the pumps or exhausters during the semi-annual monitoring. Corrective actions were made within 15 days of detection, as required, and follow up readings indicated that the repairs were successful. As a result, the report is determined to be in compliance.</p>

Activity Date	Activity Type	Compliance Status	Comments
07/13/2020	ROP Other	Compliance	<p>EES Coke submitted an amended Fugitive Dust plan to identify areas of Zug Island that EES will control for fugitive dust while USS is temporarily idled. US Steel idled Zug Island operations on March 31, 2020. However, EES Coke is continuing to operate the coke battery on Zug Island and will be responsible for fugitive dust control for paved and unpaved roads and parking lots that are used by their operations. The amended plan includes a map with all areas of EES responsibility highlighted in Appendix A and an example recordkeeping form.</p> <p>Note, at this time, the "reporting period end date" is unknown as the length of the idle is unknown at this point.</p>

07/06/2020	Release Reports	Non Compliance	<p>On July 3, 2020, EES COKE reported to the AQD the release of raw COG due to a power outage that resulted in the loss of steam from the No. 2 boilerhouse. At 12:30 am on July 4, company reported the incident to the NRC (#1281046). As such, raw coke oven gas was released to atmosphere. At the time of the call, ovens were being charged with lids open per standard industry practice according to the battery. Email states that company did not have a timeline for when they would return to "normal" operation and further details will be provided within the next 5 days. This incident triggered Rule 912 reporting.</p> <p>Follow up letter is required within 30 days per the MACT. Hard copy follow up letters were received on July 14 and August 7, 2020. EES Coke lost power to Primary substation A due to a shorted cable. Loss of power ceased steam production in Boilerhouse #2 and the exhauster operations in the byproducts plant, and emergency bleeders had to be opened at the battery. Subsequent to that, an uninterrupted power supply failed which extended the outage. 14 ovens had to be charged to atmosphere for safety purposes which lasted approximately 56 minutes. This resulted in the release of 423.8 lbs COG and 10.1 lbs benzene. SSM plan was reportedly followed.</p> <p>Based on the August 2020 letter, the company is unsure of how many deviations will be reported at this time. For purposes of this report, I chose 1 as the number of deviations but it is most likely higher. Charging to atmosphere started around midnight. For corrective actions taken, letter states EES has started an increased training and preventative maintenance program at the No 2 Boilerhouse and is in the process of purchasing an upgraded UPS that will provide battery backup for at least 2 hours.</p>
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07/06/2020	Release Reports	Non Compliance	Incident will be reevaluated during the semi annual deviation report review to determine if a VN is warranted.
06/15/2020	Excess Emissions (CEM)	Compliance	<p>3rd Quarter 2019 CERMS and COMS excess emissions and downtime report was received on October 30, 2019. Data substitution outlined in 51-08C is in use during downtime.</p> <p>For the COMS, four opacity exceedances (6 minutes each, 24 minutes total) were reported and corrective actions were taken. COMS monitor downtime was 4,032 minutes (3.0% of total operating time) during the reporting period.</p> <p>For the CERMS, no exceedances of NOx, CO, or SO2 were reported. Monitor downtime for the CERMS was 21 hours (1% of total operating time) during the reporting period; downtime was mainly for preventative maintenance.</p> <p>Monitor downtime for the COMS and CERMS was reviewed by Regina Angellotti, AQD-TPU, and compliance was chosen. No further action is necessary.</p>
06/10/2020	CO/CJ	Compliance	3rd Quarter 2019 CERMS parameter report per CO 57-2014 Paragraph A.2 was submitted with the quarterly Excess Emissions Report. No corrective actions were needed. However, related to sample for the NOx analyzer, before the maintenance flow was above the optimal range. Flow was 1.516 L/min, highest optimal range is 1.00 L/min. After maintenance, flow was 0.529 L/min.
06/10/2020	CO/CJ	Compliance	Quarterly fugitive dust report received for the 3rd Quarter 2019. Report submitted with the 3rd Quarter Excess Emission Report for the CERMS and COMS. Facility reported no deviations from fugitive dust requirements.

Activity Date	Activity Type	Compliance Status	Comments
06/10/2020	Excess Emissions (CEM)	Compliance	<p>4th Quarter 2019 CERMS and COMS excess emissions and downtime report was received on January 30, 2020. Data substitution outlined in PTI 51-08C is in use during downtime.</p> <p>For the COMS, four opacity exceedances (6 minutes each, 24 minutes total) were reported and corrective actions were taken. COMS monitor downtime was 560 minutes (0.4% of total operating time) during the reporting period. Downtime was due to preventative maintenance.</p> <p>For the CERMS, no exceedances of NOx, CO, or SO2 were reported. Monitor downtime for the CERMS was 49 hours (2.2% of total operating time) for each pollutant during the reporting period; downtime was mainly for maintenance and linearity test.</p> <p>Monitor downtime for the COMS and CERMS was reviewed by Regina Angellotti, AQD-TPU, and compliance was chosen. No further action is necessary. Note, blow back pressure is listed as 45 before maintenance and 50 after maintenance.</p>
06/10/2020	CO/CJ	Compliance	<p>Quarterly fugitive dust report received for the 4th Quarter 2019. Report submitted with the 4th Quarter Excess Emission Report for the CERMS and COMS. Facility reported no deviations from fugitive dust requirements.</p>
06/10/2020	CO/CJ	Unknown	<p>1st Quarter 2020 CERMS parameter report per CO 57-2014 Paragraph A.2 was submitted with the quarterly Excess Emissions Report. One corrective action was required related to sample flow. Sample flow was 0 before quarterly maintenance. Corrective action was replace NOx vacuum pump and install new flow capillary and O-rings. This is the second quarter in a row that there was an issue with sample flow requiring corrective action. Need to discuss with TPU and company. Compliance status of unknown was chosen for now.</p>

Activity Date	Activity Type	Compliance Status	Comments
06/10/2020	CO/CJ	Compliance	<p>4th Quarter 2019 CERMS parameter report per CO 57-2014 Paragraph A.2 was submitted with the quarterly Excess Emissions Report. One corrective action was required related to sample flow. Corrective action was reaction cell housing installed from spare unit, new ozone air dryer, now NOx/NO switching valve and new ozone scrubber.</p>
06/10/2020	Excess Emissions (CEM)	Compliance	<p>1st Quarter 2020 CERMS and COMS excess emissions and downtime report was received on May 8, 2020. Data substitution outlined in PTI 51-08C is in use during downtime.</p> <p>For the COMS, three opacity exceedances (6 minutes each, 18 minutes total) were reported and corrective actions were taken. COMS monitor downtime was 697 minutes (0.5% of total operating time) during the reporting period. Downtime was due to preventative maintenance.</p> <p>For the CERMS, no exceedances of NOx, CO, or SO2 were reported. Monitor downtime for the CERMS was 31 hours (1% of total operating time) for each pollutant during the reporting period; downtime was mainly for maintenance and repair, CGA, and PLC communication errors.</p> <p>Monitor downtime for the COMS and CERMS was reviewed by Regina Angellotti, AQD-TPU, and compliance was chosen. No further action is necessary. Note, blow back pressure is listed as 53 psi before and after maintenance.</p>

Activity Date	Activity Type	Compliance Status	Comments
05/14/2020	Other Non ROP	Unknown	<p>4th Quarter 2019 1-hour average SO2 emissions in lbs SO2/1000 scf of COG report was received by AQD on October 30, 2019. This report is required through PTI 51-08C in order to demonstrate compliance with the new SO2 limit in the permit which is 0.702 lb SO2/1000 scf COG on a 1-hr average. This limit is related to the 2.64 grains H2S/dscf that was in the prior permit. Also, this limit exists, in part, because EES Coke is located in an area that has been designated as non attainment for sulfur dioxide.</p> <p>The report indicates that there were no 1-hr exceedances of the SO2 limit during the 4th Quarter 2019. However, the facility reported some monitor downtime (approximately 50 hours) during this quarter which means hourly emissions are estimated as allowed per the methodology specified in PTI 51-08C, EUCKE -BATTERY, SC VI.9. Hence, the compliance status of Unknown.</p>
05/06/2020	Other	Non Compliance	July - December 2019 semi annual deviation report and Annual 2019 deviation report review
05/06/2020	Other	Non Compliance	January - June 2019 semi annual deviation report review
05/06/2020	MACT (Part 63)	Compliance	Subpart CCCCC
05/06/2020	MACT (Part 63)	Compliance	Subpart L
05/06/2020	ROP Semi 1 Cert	Non Compliance	See Activity Report CA_P040853526
05/06/2020	ROP SEMI 2 CERT	Non Compliance	See Activity Report CA_P040853829
05/06/2020	ROP Annual Cert	Non Compliance	See Activity Report CA_P040853829
05/06/2020	MACT (Part 63)	Compliance	Subpart CCCCC - See Activity Report CA_P040853829
05/06/2020	MACT (Part 63)	Compliance	Subpart L - See Activity Report CA_P040853829



Activity Date	Activity Type	Compliance Status	Comments
04/30/2020	Other Non ROP	Unknown	<p>1st Quarter 2020 1-hour average SO2 emissions in lbs SO2/1000 scf of COG report was received by AQD via email on 4/29/2020. Email states hard copy to follow. Hard copy was received on May 8, 2020. This report is required through PTI 51-08C in order to demonstrate compliance with the new SO2 limit in the permit which is 0.702 lb SO2/1000 scf COG on a 1-hr average. This limit is related to the 2.64 grains H2S/dscf that was in the prior permit. Also, this limit exists, in part, because EES Coke is located in an area that has been designated as non attainment for sulfur dioxide.</p> <p>The report indicates that there were no 1-hr exceedances of the SO2 limit during the 1st Quarter 2020. However, the facility reported some monitor downtime during this quarter which means hourly emissions are estimated as allowed per the methodology specified in PTI 51-08C, EUCKE-BATTERY, SC VI.9. Hence, the compliance status of Unknown. Note, there were about 31 hours of downtime where emissions had to be estimated. Highest one hour average was 0.609 lbs SO2/1000 scf of COG.</p>
04/29/2020	NSPS (Part 60)	Compliance	<p>2020 Annual COMS Certification Audit, per 40 CFR Part 60 Appendix B PS1, was performed on March 20, 2020 by Teledyne. Report states that unit passed the audit. The calibration error, zero compensation, and optical alignment all met the required specifications. ROP certification accompanied the results.</p>
04/27/2020	ROP Other	Compliance	<p>2019 MAERS Report/ROP Certification Form Received</p>

Activity Date	Activity Type	Compliance Status	Comments
04/27/2020	Stack Test	Compliance	Test protocol for yearly CERMS RATA at EES Coke Battery was received on March 13, 2020. Test protocol was developed by CleanAir Engineering who performs the RATA. A RATA is required in the second quarter of every year. RATA is scheduled to occur on April 15. Compliance was chosen as it relates to the requirement to submit a test protocol.
04/08/2020	MAERS	Compliance	MAERS report was submitted electronically on March 4, 2020. There were no additions or removals. Substantial emission changes in the report are due to updated emission factors from stack testing at the PECS stack in 2018 and the underfire combustion stack in 2019. Company did not report COG emissions this year; need reason from company.

Activity Date	Activity Type	Compliance Status	Comments
01/27/2020	Stack Test	Compliance	<p>Results of emissions testing for PM, PM10, PM2.5, and VOC of the EU-COKEBATTERY Underfire Combustion Stack were received on October 22, 2019. Testing was performed by CleanAir Engineering on September 10-12, 2019. Test protocol was received on August 7, 2019. Approval letter was sent on August 12, 2019. TPU completed a review on December 5, 2019 (attached). Based on the TPU review, results were as follows:</p> <p>Non sulfate PM - 1.62 pph (25.7 limit); 0.001 gr/dscf (0.012 limit)  FPM - 0.027 lbs/1000 lbs dry at 50% excess O2 (0.095 limit)  PM 10 and 2.5 - 33.1 pph (73.3 limit)  VOC - 27.8 pph (43.1 limit);  0.0632 lb/MMBTU heat input (0.0956 limit)</p> <p>Based on the test results, facility appears to be in compliance with the permit limits. Process data submitted indicates an oven was pushed every 14-15 minutes. Note, test report indicates test was not completed within 36 hours due to weather, process problems, and issues with testing probes. Facility notified AQD of this during the testing event. See attached email.</p> <p>Note, the average ESP flow rate was 727,771 ft<sup>3</sup> (actual) and the average stack temperature was 233.7F.</p>

Activity Date	Activity Type	Compliance Status	Comments
12/23/2019	Release Reports	Unknown	<p>On November 7, 2019, EES COKE reported to the NRC the release of COG due to the pilot light on the COG flare going out. On November 11, 2019, AQD received a letter from EES COKE with further details. Pilot went out on 9:07 a.m. and was relit in 10:07 a.m. Reason was a fuse blew. EES Coke is investigating how to incorporate into a PM/MAP plan. 154 pounds of benzene were released</p> <p>I had a phone conversation with Brenna Harden about this incident. I asked how the company was alerted to a blown fuse and what preventative measures were going to be taken. She did not know at the time but committed to providing a follow up letter.</p> <p>A second letter was received on December 23, 2019. Compressed air line has been replaced. Gas flow valve locked into the open position until a permanent solution is found. SOP was updated. Other measures outlined are still being investigated. Needs more follow up.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/30/2019	Other Non ROP	Unknown	<p>3rd Quarter 2019 1-hour average SO2 emissions in lbs SO2/1000 scf of COG report was received by AQD on October 30, 2019. This report is required through PTI 51-08C in order to demonstrate compliance with the new SO2 limit in the permit which is 0.702 lb SO2/1000 scf COG on a 1-hr average. This limit is related to the 2.64 grains H2S/dscf that was in the prior permit. Also, this limit exists, in part, because EES Coke is located in an area that has been designated as non attainment for sulfur dioxide.</p> <p>The report indicates that there were no 1-hr exceedances of the SO2 limit during the 3rd Quarter 2019. However, the facility reported some monitor downtime (approximately 20 hours) during this quarter which means hourly emissions are estimated as allowed per the methodology specified in PTI 51-08C, EUCKE -BATTERY, SC VI.9. Hence, the compliance status of Unknown.</p>
10/08/2019	CO/CJ	Compliance	<p>Quarterly fugitive dust report received for the 2nd Quarter 2019. Report submitted with the 2nd Quarter Excess Emission Report for the CERMS and COMS. Facility reported no deviations from fugitive dust requirements.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/08/2019	NESHAP (Part 61)	Compliance	<p>Quarterly and semi-annual LDAR monitoring ("Benzene Monitoring Report") to comply with Part 61 Subparts L and V was received on July 30, 2019. Semi-annual monitoring is performed on the gas blanketing system of Loop "D" and quarterly and semi-annual monitoring for equipment leaks. Report states that between Jan - June 2019, two quarterly equipment leak monitoring, one semi-annual equipment leak monitoring, and one semi-annual gas blanketing monitoring was performed by Sidock Group, Inc.</p> <p>Equipment leaks are defined as 10,000 ppm above background while the gas blanketing system is subject to a limit of 500 ppm above background. Report indicated that no equipment tested exceeded the 10,000 ppm leak threshold. No leaks were detected at the pumps or exhausters during the semi-annual monitoring. Three component leaks exceeding the "no detect" limit (500 ppm) were detected on pressure relief valves; corrective actions were made within 15 days of detection, as required, and follow up readings indicated that the repairs were successful. As a result, the report is determined to be in compliance.</p> <p>Note, report states that light oil production was temporarily shut down due to equipment failure. Shut down was from January 31 - April 14.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/08/2019	Other Non ROP	Unknown	<p>2nd Quarter 2019 1-hour average SO2 emissions in lbs SO2/1000 scf of COG report was received by AQD on July 31, 2019. This report is required through PTI 51-08C in order to demonstrate compliance with the new SO2 limit in the permit which is 0.702 lb SO2/1000 scf COG on a 1-hr average. This limit is related to the 2.64 grains H2S/dscf that was in the prior permit. Also, this limit exists, in part, because EES Coke is located in an area that has been designated as non attainment for sulfur dioxide.</p> <p>The report indicates that there were no 1-hr exceedances of the SO2 limit during the 2nd Quarter 2019. However, the facility reported some monitor downtime during this quarter which means hourly emissions are estimated as allowed per the methodology specified in PTI 51-08C, EUCKE-BATTERY, SC VI.9. Hence, the compliance status of Unknown.</p>

Activity Date	Activity Type	Compliance Status	Comments
10/08/2019	Excess Emissions (CEM)	Compliance	<p>2nd Quarter 2019 CERMS and COMS excess emissions and downtime report was received on July 31, 2019. Data substitution outlined in 51-08C is in use during downtime.</p> <p>For the COMS, seven opacity exceedances (6 minutes each, 42 minutes total) were reported and corrective actions were taken. Four of the exceedances were due to an issue with Oven 8 on 4/9/19; oven was taken out of service and repaired. COMS monitor downtime was 5,003 minutes (3.8% of total operating time) during the reporting period. 4,472 minutes of downtime was due to the COMS being removed during the RATA on 4/30/19 to 5/3/19; the rest of the downtime was due to preventative maintenance</p> <p>For the CERMS, no exceedances of NOx, CO, or SO2 were reported. Monitor downtime for the CERMS was 81 hours (3.7% of total operating time) during the reporting period; downtime was mainly for maintenance and repair.</p> <p>Monitor downtime for the COMS and CERMS was reviewed by Regina Angellotti, AQD-TPU, on August 1, 2019, and compliance was chosen. No further action is necessary.</p>

Name: Katherine Koster

Date: 3/17/2021

Supervisor: April Wendling